

# 7017 / 7017SF Technical Reference Manual

## Table of Contents

- [Section 1](#) Service Call Procedures
- [Section 2](#) Status Indicator Repair Analysis Procedures
- [Section 3](#) Image Quality
- [Section 4](#) Repair / Adjustment
- [Section 5](#) Parts List
- [Section 6](#) General Procedures / Information
- [Section 7](#) Wiring Data
- [Section 8](#) Store and Forward Option

# 1. Service Call Procedures

- Introduction [1-2](#)
- Call flow [1-2](#)

## Procedures

- 1.1 Initial Actions [1-2](#)
- 1.2 System Checks [1-2](#)
  - 1.2.1 Prepare for System Checks [1-3](#)
  - 1.2.2 Off-Line System Check [1-3](#)
  - 1.2.3 On-Line System Check [1-5](#)
- 1.3 Additional System Checks [1-6](#)
  - 1.3.1 G2 On-Line Check [1-6](#)
  - 1.3.2 Store and Forward Check [1-6](#)
  - 1.3.3 Automatic Document Feeder Check [1-7](#)
- 1.4 Final Actions [1-7](#)
  - 1.4.1 Call Completion [1-7](#)

## Section Introduction

The Service Call Procedures section is used to identify a suspected problem. This section contains, Initial Actions, System Check, Additional Systems Check and Final Actions. Initial Action is used to gather information regarding the performance of the terminal. Initial Action is usually the first step performed on a service call. System Check is used to verify the normal operation of the terminal. Additional System Check contains mechanical RAPs (Repair Analysis Procedures) and various built-in electrical tests that can be initiated by the service representative. Refer to Additional System Check when directed by System Check. Final Actions is used to complete the service call after the problem has been repaired.

### Call Flow

The Call Flow diagram illustrates the normal sequence of events used on each service call.

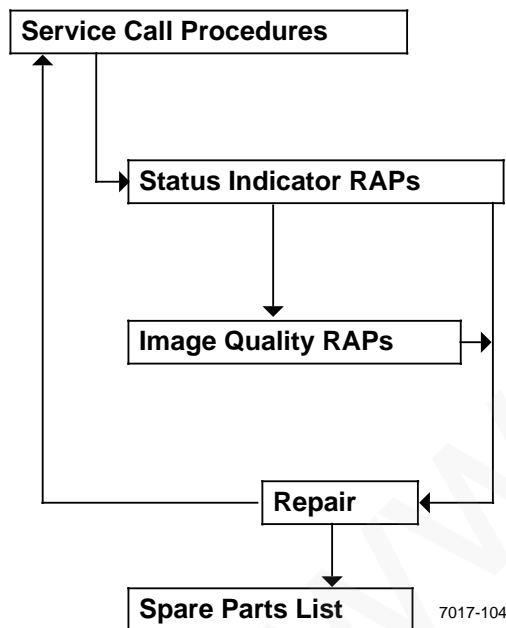


Figure 1 Call Flow

## Procedures

### 1.1 Initial Action

Initial Action is used to gather information from the operator concerning problems at the local terminal. Question the operator and make note of symptoms and error codes or other information concerning the error. This information may help you to identify a problem in the case of an intermittent or unusual machine error. Once all information is gathered, prepare for System Check. If the operator is not available, go directly to the System Check.

### 1.2 System Checks

Begin each procedure in System Check with Step 1. It is important to follow the sequence outlined in the Off-Line and On-Line procedures since each step assumes the previous steps to be correct. Each step is the normal operational event of the terminal and can be confirmed by answering **Y** (yes) to the statement. A **Y** response leads to the next step. A **N** (No) response will lead to a RAP (Section 2.0) or a component replacement. Replace the components listed after **N** in the order given.

Perform the System Check to verify repair after completing each corrective action (replacing or adjusting a part, or reseating a connector, etc.).

If an error code is displayed, go to Section 2.0. Turn to the Table of Contents and locate the Error Code List. Locate the error code that was displayed and follow the Corrective Action indicated.

If an operator function and error code are displayed, write down the error code and perform the operator function. In the event the operator function does not repair the problem, go to Section 2. Locate the error code in the Error Code List and follow the actions indicated.

In the event Service Call Procedures do not isolate the problem call for assistance.

## 1.2.1 Prepare for System Checks

1. Check for any obvious problems such as a recording paper jam, original jam, telephone or data cable connections loose at the terminal jacks or wall jack.
2. Ensure that handset is on handset cradle and that power cord is connected to terminal and to wall outlet.
3. If unable to perform any of the following steps, go to 1.2.2 Off-Line System Check.
4. Enter service mode.
  - a. Press Menu.
  - b. Press \* on the key pad three times.
  - c. Press Stop.
  - d. Upper line of display blinks to indicate terminal is in service mode.
5. Print the service option report (save for Final Actions).
  - a. Press Menu.
  - b. On the keypad, press 2 then 2.
  - c. Press Start.
6. Set listen to dial to on.

*RX NOTE: Perform this step only if listen to dial is permitted in your country.*

  - a. Press Menu.
  - b. On the keypad, press 4 then 5. Display indicates:

45	<b>LISTEN TO DIAL</b> <b>PRESS [ENTER] OR [SCROLL]</b>
----	---

- c. Press Enter.
- d. If listen to dial is on, go to next step. If listen to dial is off, press Select to change to on.
- e. Press Enter.

7. Set key tone to on.
    - a. Press Menu.
    - b. On the keypad, press 5 then 2. Display indicates:
- |    |   |
|----|---|
| 52 | <b>PANEL KEY TONE</b><br><b>PRESS [ENTER] OR [SCROLL]</b> |
|----|---|
- c. Press Enter.
  - d. If panel key tone is on, go to next step. If panel key tone is off, press Select to change to on.
  - e. Press Enter.
  8. Go to 1.2.2 Off-Line System Check.

## 1.2.2 Off-Line System Check

*NOTE: If an error code (COXX, FPXX, EXXX, or OPXX) appears at any time during this check, do not continue. Refer to Section 2 for the Error Code List and perform the actions indicated.*

1. Ensure that handset is on handset cradle. Disconnect power cord from terminal, wait five seconds, then reconnect power cord to terminal. Observe red LED and green LED of power supply come on. (LEDs are visible through fan vent at rear of terminal.)  
**Y N**  
**| RAP 2.3.1**
2. Power supply fan comes on.  
**Y N**  
**| Replace fan.**
3. Within 3 seconds display indicates:

Please WAIT
Telecopier 7017

- Y N**  
**| Replace A2, A6, A10.**
4. Approximately 15 seconds after terminal powers up, power supply fan and red LED go off.  
**Y N**  
**| RAP 2.3.12**
  5. ADF feed belt and nudger are stationary.  
**Y N**  
**| Replace A2.**

6. Look upward into document output area (between upper and lower scan covers). LED array on A1 (video assembly) is off. (Ignore the momentary flash.)

**Y N**  
| **Replace A2.**

7. Approximately 15 seconds after terminal powers up, following message appears:

<b>LOAD ORIGINALS FACE DOWN IN INPUT TRAY</b>	<b>DATE</b>
---	-------------

**Y N**  
| **Check document sensor (RAP 2.3.8); replace A2, A10**

8. Error Correct LED is off.

**Y N**  
| **Press Comm Mode key one time, then go to next step.**

9. Only one Original LED, only one Resolution LED, and only one Comm Mode LED are on.

**Y N**  
| **Replace A2, A6.**

10. Control panel LEDs on steady (not flashing).

**Y N**  
| **Replace A2, A6.**

*NOTE: If keys do not function properly at any time during remainder of test, replace A2, A6.*

11. Tone is heard when Stop key is pressed.

**Y N**  
| **Replace A2, A6, speaker.**

12. Run Auto Diagnostics.

- a. Press Menu.
- b. On the key pad, press 2 then 4.
- c. Press Start. The display indicates:

<b>24</b>	<b>DIAGNOSTICS</b>
-----------	--------------------

**Y N**  
| **Perform the operator action indicated. Go to Section 2. for the Error Code List.**

13. Printer operates without excessive motor noise during the print operation.

**Y N**  
| **Check printer belt (RAP 2.3.11); replace A2, print motor.**

14. Printer completely feeds approximately 14 inches (35.5 cm) of recording paper out of the terminal.

**Y N**  
| **RAP 2.3.6; replace A2.**

15. Recording paper is cut.

**Y N**  
| **RAP 2.3.6; replace A2, cutter solenoid.**

16. The diagnostic test pattern is acceptable (compare to test pattern in Section 3).

**Y N**  
| **RAP 2.3.3**

*NOTE: If extended operation of printer is desired, perform RAP 2.3.7 Paper Feed Test.*

17. Set document guides for 8.5 inches (21.6 cm).

18. Place original (test pattern 82P151) into the ADF face down. The display indicates:

<b>DIAL TELEPHONE NUMBER</b>
<b>PRESS [COPY] TO MAKE A COPY</b>

**Y N**  
| **Check document sensor (RAP 2.3.8); replace A2.**

19. Press Copy, then press Start. Nudger cycles only once as original is fed into scanner.

**Y N**  
| **Replace A2, nudger solenoid.**

20. Scanner motor noise is normal (no excessive noise).

**Y N**  
| **Replace A2; check scan input drive belt (RAP 2.3.11); replace scan motor.**

21. Original is fed through scanner.

**Y N**  
| **Replace video assembly, A2.**

22. Recording paper is cut, and original feeds out.

**Y N**  
| **Check scan position sensor (RAP 2.3.8), scan output drive belt (RAP 2.3.11); replace A2.**

23. Original is unwrinkled.

**Y N**  
| **Check platen belt (RAP 2.3.11); replace A2, scan motor.**

24. Image is full size (not reduced).  
Y N  
| **Check wide original sensor (RAP 2.3.8); replace A2.**
25. Image is parallel with paper edges (not skewed).  
Y N  
| **Check platen belt (RAP 2.3.11).**
26. Image quality is acceptable (compare to test pattern sample in Section 3).  
Y N  
| **Clean platen glass; replace A2, video assembly.**
27. Set document guides for 11 inches (28 cm).
28. Place test pattern 82P151 into the ADF face down. Reduction LED comes on.  
Y N  
| **Check wide original sensor (RAP 2.3.8); replace A2.**
29. Press Copy, then press Start. The original is fed into the Scanner.  
Y N  
| **Replace A2.**
30. Image quality is acceptable (compare to Wide Original sample test pattern in Section 3).  
Y N  
| **Clean platen glass; replace A2, video assembly.**
31. Perform 1.2.3 On-Line System Check.

### 1.2.3 On-Line System Check

*NOTE: Perform this check only after 1.2.2 Off-Line System Check has been performed.*

*NOTE: If an error code (COXX, FPXX, EXXX, or OPXX) appears at any time during this check, do not continue. Refer to Section 2. for the Error Code List and perform the actions indicated.*

1. Perform a send operation to a known good G3 facsimile terminal.

*RX NOTE: If listen to dial is not permitted in your country, go to step 3.*

2. Dial tone is heard when terminal goes On Line.

Y N  
| **RAP 2.3.4.**

3. Dialing is completed successfully.

Y N  
| **Replace A10, A2.**

4. Terminal transmitted in G3 mode at 9600.

Y N  
| **Replace A5, A2.**

5. After completion of the send operation, the display indicates:

<b>SEND OPERATION COMPLETE</b>	<b>#1</b>
<b>TIME</b>	<b>DATE</b>

Y N  
| **Replace A2, A5, A10.**

6. Image quality received at the remote terminal is acceptable. (Image quality acceptance is determined by the remote operator's perception of quality.)

Y N  
| **RAP 2.3.13.**

7. Call the terminal from another telephone. The terminal answers with a ready tone and the following is displayed for approximately 3 seconds.

<b>INCOMING CALL</b>	
<b>TIME</b>	<b>DATE</b>

Y N  
| **RAP 2.3.5.**

8. Perform a receive operation. Terminal receives normally at 9600 bps.

Y N  
| **Replace A10, A2.**

9. Image quality is acceptable (refer to Image Quality Section 3).

Y N  
| **RAP 2.3.13.**

10. All suspect options and features have been checked.

Y N  
| **Refer to Table 1 to select the appropriate Additional System Checks (1.3).**

11. Go to Final Actions.

**Table 1. Additional System Checks**

<u>Suspect Option or Feature</u>	<u>Check</u>
G2 mode in send or receive	1.3.1
Store and forward option	1.3.2
Automatic Document Feeder (multiple originals)	1.3.3

24. Image is full size (not reduced).  
**Y N**  
| **Check wide original sensor (RAP 2.3.8); replace A2.**
25. Image is parallel with paper edges (not skewed).  
**Y N**  
| **Check platen belt (RAP 2.3.11).**
26. Image quality is acceptable (compare to test pattern sample in Section 3).  
**Y N**  
| **Clean platen glass; replace A2, video assembly.**
27. Set document guides for 11 inches (28 cm).
28. Place test pattern 82P151 into the ADF face down. Reduction LED comes on.  
**Y N**  
| **Check wide original sensor (RAP 2.3.8); replace A2.**
29. Press Copy, then press Start. The original is fed into the Scanner.  
**Y N**  
| **Replace A2.**
30. Image quality is acceptable (compare to Wide Original sample test pattern in Section 3).  
**Y N**  
| **Clean platen glass; replace A2, video assembly.**
31. Perform 1.2.3 On-Line System Check.

### 1.2.3 On-Line System Check

*NOTE: Perform this check only after 1.2.2 Off-Line System Check has been performed.*

*NOTE: If an error code (COXX, FPXX, EXXX, or OPXX) appears at any time during this check, do not continue. Refer to Section 2. for the Error Code List and perform the actions indicated.*

1. Perform a send operation to a known good G3 facsimile terminal.

*RX NOTE: If listen to dial is not permitted in your country, go to step 3.*

2. Dial tone is heard when terminal goes On Line.

**Y N**  
| **RAP 2.3.4.**

3. Dialing is completed successfully.

**Y N**  
| **Replace A10, A2.**

4. Terminal transmitted in G3 mode at 9600.

**Y N**  
| **Replace A5, A2.**

5. After completion of the send operation, the display indicates:

<b>SEND OPERATION COMPLETE</b>	<b>#1</b>
<b>TIME</b>	<b>DATE</b>

**Y N**  
| **Replace A2, A5, A10.**

6. Image quality received at the remote terminal is acceptable. (Image quality acceptance is determined by the remote operator's perception of quality.)

**Y N**  
| **RAP 2.3.13.**

7. Call the terminal from another telephone. The terminal answers with a ready tone and the following is displayed for approximately 3 seconds.

<b>INCOMING CALL</b>	<b>DATE</b>
<b>TIME</b>	

**Y N**  
| **RAP 2.3.5.**

8. Perform a receive operation. Terminal receives normally at 9600 bps.

**Y N**  
| **Replace A10, A2.**

9. Image quality is acceptable (refer to Image Quality Section 3).

**Y N**  
| **RAP 2.3.13.**

10. All suspect options and features have been checked.

**Y N**  
| **Refer to Table 1 to select the appropriate Additional System Checks (1.3).**

11. Go to Final Actions.

**Table 1. Additional System Checks**

<u>Suspect Option or Feature</u>	<u>Check</u>
G2 mode in send or receive	1.3.1
Store and forward option	1.3.2
Automatic Document Feeder (multiple originals)	1.3.3



## 1.3 Additional System Checks

### 1.3.1 G2 On-Line Check

*NOTE: Perform this check only after 1.2.2 Off-Line System Check and 1.2.3 On-Line System Check have been performed. Transmit and receive to/from a known good terminal capable of G2 operation.*

*NOTE: If an error code (COXX, FPXX, EXXX, or OPXX) appears at any time during this check, do not continue. Refer to Section 2 for the Error Code List and perform the actions indicated.*

1. Ensure power has been on for 15 seconds, then enter service mode.
2. Press Menu.
3. Press 9 then 3 on the key pad.
4. Press Start.
5. Display indicates:

93	COMMUNICATIONS MODE >XXX PRESS [START] OR [SCROLL]
----	---

6. Note which communications mode customer has selected (AUTO, G3STD, or G2).
7. If G2 not selected, select G2 by pressing Select until display indicates:

93	COMMUNICATIONS MODE >G2 PRESS [START] OR [SCROLL]
----	--

8. Press Enter.

9. Perform a transmit operation and then a receive operation. Terminal transmits and receives normally for CCITT G2.

**Y N**  
**| Replace A5, A2,**

10. Press Menu.
11. Press 9 then 3 on the key pad.
12. Press Start.
13. Press Select until display indicates communications mode customer had selected (AUTO, G3STD, or G2) as noted in Step 9.
14. Return to procedure which directed you to this check or go to Final Actions.

### 1.3.2 Store and Forward Check

*NOTE: Perform this check only after 1.2.2 Off-Line System Check and 1.2.3 On-Line System Check have been performed.*

*NOTE: If an error code (COXX, FPXX, EXXX, or OPXX) appears at any time during this check, do not continue. Refer to Section 2 for the Error Code List and perform the actions indicated.*

1. Visually check that store and forward A8 PWB is installed.
2. Ensure power has been on for 15 seconds, then enter service mode.
3. Press Menu.
4. Press 1 then 8 on key pad. Display indicates:

18	CONFIDENTIAL SEND >OFF PRESS [SELECT] TO CHANGE THEN [ENTER]
----	---

**Y N**  
**| Replace A8, A2.**

5. Exit service mode.
6. Ask customer to perform store and forward operation.
7. Store and forward completes normally.  
**Y N**  
**| Replace A8, A2.**
8. Return to procedure which directed you to this check or go to Final Actions.



### 1.3.3 Automatic Document Feeder Check

*NOTE: Perform this check only after 1.2.2 Off-Line System Check and 1.2.3 On-Line System Check have been performed.*

*NOTE: If an error code (CXXX, FPXX, EXXX, or OPXX) appears at any time during this check, do not continue. Refer to Section 2 for the Error Code List and perform the actions indicated.*

1. Enter Service Mode.
2. Place at least three sheets of paper (multiple originals) into input tray.
3. Enter Original Feed Test.
  - a. Press Menu.
  - b. On the key pad, press 7 then 2. The display indicates:

72	ORIGINAL FEED PRESS [START] OR [SCROLL]
----	--

4. Press Start.
5. Originals feed one sheet at a time.  
**Y N**  
**| RAP 2.3.10.**
6. Press Stop to end test.
7. Go to Final Actions.

### 1.4 Final Action

#### 1.4.1 Call Completion

1. Clean the platen glass.
  - a. Open and secure the upper scan cover.
  - b. Moisten a soft, lint-free cloth or paper towel with Xerox Lens and Mirror Cleaner and clean the platen glass.
2. Cheat upper scan cover interlock switch.
3. Enter Service Mode.

*NOTE: Use Xerox CLEAN-UPS to perform the following cleaning functions (it may be necessary to use several CLEAN-UPS).*

4. Enter the Scan Motor Test.
  - a. Press Menu.
  - b. On the key pad, press 7 then 4.
  - c. Press Start. (Scan motor operates.)
  - d. Hold the CLEAN-UP against the ADF belt. Apply enough pressure to clean the ADF belt but not stall the scan motor.
5. Clean the ADF belt.
6. Press Stop to end test.
7. Clean the following:
  - a. Clean the retard pad.
  - b. Clean the lower scan drive rollers.
  - c. Clean the platen roller.
  - d. Clean the upper scan idler rollers.

8. Clean the pressure roller.
  - a. Open printer.
  - b. Clean the exposed area of the pressure roller and rotate the roller clockwise to clean the complete roller surface.
9. Make a Service Options Report for future reference.
  - a. Press Menu.
  - b. On the key pad, press 2 then 2.
  - c. Press Start.
10. Refer to Service Options Report printed during Prepare For System Check (if available) and ensure present configuration agrees with original customer configuration.
11. Fold as necessary and place the Service Options Report behind the Operator Guide in the output tray.
12. Perform System Check to verify operation.
13. Replace and clean all covers removed during the service call.
14. Complete all required administrative tasks.

*NOTE: The Service Options Report is retained as a record of the system data configuration and all option settings configured by the Customer. This is useful in case such information is lost due to Main A2 PWB replacement or inadvertent erasure.*

## 2. Status Indicator Repair Analysis Procedures

- Introduction [2-2](#)
- PWB Designations [2-2](#)

### Error Code List

- COXX Error Codes [2-3](#)
- FPXX Error Codes [2-3](#)
- EXXX Error Codes [2-3](#)
- FCXX Error Codes [2-4](#)
- OPXX Error Codes [2-5](#)

### Status Indicator RAPs

- RAP 2.3.1 One or Both LEDs of Power Supply are Off [2-7](#)
- RAP 2.3.2 Load Isolation [2-9](#)
- RAP 2.3.3 Diagnostic Pattern is Unacceptable [2-10](#)
- RAP 2.3.4 Dial Tone is Not Heard [2-10](#)
- RAP 2.3.5 The Terminal Does Not Answer [2-11](#)
- RAP 2.3.6 Mechanical Checkout [2-11](#)
- RAP 2.3.7 Paper Feed Test [2-12](#)
- RAP 2.3.8 Sensor Test [2-12](#)
- RAP 2.3.9 Scanner Test [2-14](#)
- RAP 2.3.10 Automatic Document Feeder Test [2-14](#)
- RAP 2.3.11 Belt Checkout [2-16](#)
- RAP 2.3.12 Both LEDs Remain On [2-16](#)
- RAP 2.3.13 Received Image Quality is Unacceptable [2-16](#)

## Section Introduction

The Status Indicator Repair Analysis Procedures section is used to isolate an identified problem to a faulty component or subassembly. It contains this Introduction, an Error code list and RAPs (Repair Analysis Procedures).

RAPs have been written for most defects that require the replacement of four or more components or subassemblies.

The Error Code List includes all error codes generated by the terminal and displayed in the Control Panel Display Window. The Action column of the Error Code List identifies a component(s), subassembly, or RAP that correspond to the error code.

Use the Error Code List to identify the action required for error codes displayed in the Display Window.

RAPs, when followed step-by-step, will isolate a problem to a specific component or subassembly.

### 2.1.1 Status Indicator Repair Analysis Procedures

Begin Repair Analysis Procedures with Step 1. A **Y** (yes) response will lead you to the next step. An **N** (no) response will indicate a component replacement. Replace in sequence, the components listed under the Action column. Run System Check to verify that each component replaced has resolved the problem.

For example, **Error Code CO42** identifies A2 PWB and A5 PWB as replacement parts. Replace the A2 PWB first. Then run System Check to verify that replacing A2 has resolved the problem. If not, replace A5 PWB and reinstall the original A2 PWB. Then run System Check again to verify that replacing A5 PWB has resolved the problem. If the problem is still not resolved, call for assistance. If the problem is resolved, go to Final Actions.

In the case of **OPXX** codes, the terminal will display a message and an error code. The Display Message column indicates an operator function that the service representative can perform to affect the performance of the terminal. In the event the function does not correct the problem and the error code continues to be displayed, refer to the Action column.

Reinstall good parts that may have been removed during troubleshooting after the repair is verified.

### 2.1.2 Printed Wiring Board (PWB) Designations

- A0 - CNC
- A1 - Video assembly
- A2 - Main
- A3 - Telephone line filter assembly
- A5 - Modem
- A6 - Control panel assembly
- A8 - Store and forward
- A10 - Coupler

*Note: All meter ranges and readings are referenced to the Xerox Digital Meter (600T1616). These ranges and readings may not be valid with other meters.*

## 2.2 Error Code List

### 2.2.1 CXXX Error Codes

<u>Code</u>	<u>Corrective Action</u>
CO32	Replace A2, A8
CO42	Replace A2, A5
CO43	Replace A2, A5, perform RAP 2.3.1
CO52	Replace A2, A10
CO53	Replace A2, A10
CO54	Replace A2, A10
CO55	Replace A2, A5, A10
CO60	Replace A2, video assembly
CO61	Replace video assembly, A2
CO70	Replace A2, A8
CO71	Replace A2, A8
CO72	Replace A2, A8
CO80	Replace A2
CO81	Replace A2
CO82	Replace A2
CO83	Replace A2

### 2.2.2 FPXX Error Codes

<u>Code</u>	<u>Corrective Action</u>
FP01	Replace A2
FP02	Replace A2
FP03	Replace A2
FP04	Replace A2
FP05	Replace A2
FP09	Replace A2, A6
FP10	Replace A2, power supply assembly
FP11	Replace A2
FP12	Replace A2
FP13	Replace A2
FP14	Replace A2, A5
FP15	Replace A2
FP16	Replace A2, A10
FP20	Replace A2, A5, A8

### 2.2.3 EXXX Error Codes

<u>Code</u>	<u>Corrective Action</u>
E001	Replace A2, A5, A8
E003	Replace A2
E004	Replace A2
E006	Replace A2
E007	Replace A2
E009	Replace A2
E011	Replace A2
E012	Replace A2
E013	Replace A2
E021	Replace A2
E022	Replace A2
E032	Replace A2, A5
E033	Replace A2, A5
E034	Replace A2, A5
E035	Replace A2, A10
E036	Replace A2, A10
E038	Replace A2, A10
E040	Replace A2
E041	Replace A2, A5
E050	Replace A2, A8
E051	Replace A2, A8
E052	Replace A2, A8
E200	Replace A2, A5, A10
E201	Replace A2, A5, A10
E203	Replace A2, A5, A10
E204	Replace A2, A5, A10
E205	Replace A2, A5, A10
E210	Replace A2, A5, A10
E211	Replace A2, A5, A10
E212	Replace A2, A5, A10
E220	Replace A2, A5, A10
E221	Replace A2, A5, A10
E222	Replace A2, A5, A10
E223	Replace A2, A5, A10
E231	Replace A2, A5
E240	Replace A2, A5, A10
E241	Replace A5, A5, A10
E242	Replace A2, A5, A10
E243	Replace A2, A5, A10
E244	Replace A2, A5, A10
E245	Replace A2, A5, A10
E246	Replace A2, A5, A10
E248	Replace A2, A5, A10

<u>Code</u>	<u>Corrective Action</u>
E250	Replace A2, A5, A10
E251	Replace A2, A5, A10
E252	Replace A2, A5, A10
E253	Replace A2, A5, A10
E254	Replace A2, A5, A10
E255	Replace A2, A5, A10
E256	Replace A2, A5, A10
E257	Replace A2, A5, A10
E260	Replace A2, A5, A10
E261	Replace A2, A5, A10
E262	Replace A2, A5, A10
E263	Replace A2, A5, A10
E264	Replace A2, A5, A10
E265	Replace A2, A5, A10
E400	Replace A2
E401	Replace A2
E402	Replace A2
E600	Replace video assembly, A2
E601	Replace video assembly, A2
E602	Replace video assembly, A2
E800	Replace A2, Print Motor
E803	Replace A2
E804	Replace A2
E805	Replace A2

## 2.2.4 FCXX Error Codes

<u>Code</u>	<u>Corrective Action</u>
FC02	Replace A2, A6
FC03	Replace A2
FC04	Replace A2
FC06	Replace A2, A5
FC07	Replace A2
FC08	Replace A2
FC09	Replace A2
FC10	Replace A2
FC11	Replace A2
FC12	Replace A2, A5
FC14	Replace A2
FC15	Replace A2
FC16	Replace A2
FC17	Replace A2
FC18	Replace A2
FC19	Replace A2
FC20	Replace A2
FC21	Replace A2
FC22	Replace A2
FC23	Replace A2
FC24	Replace A2
FC25	Replace A2
FC26	Replace A2
FC27	Replace A2
FC28	Replace A2
FC29	Replace A2
FC30	Replace A2
FC31	Replace A2
FC32	Replace A2
FC33	Replace A2
FC34	Replace A2
FC37	Replace A8

<u>Code</u>	<u>Corrective Action</u>
FC50	Replace A2, A10, perform RAP 2.3.1
FC60	Replace A2, video assembly
FC70	Replace A8
FC71	Replace A2
FC72	Replace A8
FC73	Replace A2
FC74	Replace A2
FC75	Replace A2
FC81	Replace A2
FC83	Replace A2
FC85	Replace A2
FC87	Replace A2

<u>Code</u>	<u>Corrective Action</u>
E250	Replace A2, A5, A10
E251	Replace A2, A5, A10
E252	Replace A2, A5, A10
E253	Replace A2, A5, A10
E254	Replace A2, A5, A10
E255	Replace A2, A5, A10
E256	Replace A2, A5, A10
E257	Replace A2, A5, A10
E260	Replace A2, A5, A10
E261	Replace A2, A5, A10
E262	Replace A2, A5, A10
E263	Replace A2, A5, A10
E264	Replace A2, A5, A10
E265	Replace A2, A5, A10
E400	Replace A2
E401	Replace A2
E402	Replace A2
E600	Replace video assembly, A2
E601	Replace video assembly, A2
E602	Replace video assembly, A2
E800	Replace A2, Print Motor
E803	Replace A2
E804	Replace A2
E805	Replace A2

## 2.2.4 FCXX Error Codes

<u>Code</u>	<u>Corrective Action</u>
FC02	Replace A2, A6
FC03	Replace A2
FC04	Replace A2
FC06	Replace A2, A5
FC07	Replace A2
FC08	Replace A2
FC09	Replace A2
FC10	Replace A2
FC11	Replace A2
FC12	Replace A2, A5
FC14	Replace A2
FC15	Replace A2
FC16	Replace A2
FC17	Replace A2
FC18	Replace A2
FC19	Replace A2
FC20	Replace A2
FC21	Replace A2
FC22	Replace A2
FC23	Replace A2
FC24	Replace A2
FC25	Replace A2
FC26	Replace A2
FC27	Replace A2
FC28	Replace A2
FC29	Replace A2
FC30	Replace A2
FC31	Replace A2
FC32	Replace A2
FC33	Replace A2
FC34	Replace A2
FC37	Replace A8

<u>Code</u>	<u>Corrective Action</u>
FC50	Replace A2, A10, perform RAP 2.3.1
FC60	Replace A2, video assembly
FC70	Replace A8
FC71	Replace A2
FC72	Replace A8
FC73	Replace A2
FC74	Replace A2
FC75	Replace A2
FC81	Replace A2
FC83	Replace A2
FC85	Replace A2
FC87	Replace A2

## 2.2.5 OPXX Error Codes

<u>Code</u>	<u>Meaning</u>	<u>Display message</u>	<u>Corrective Action (after performing message)</u>
OP03	Invalid telephone number detected during pulse dial (#,*)	TELEPHONE NUMBER ENTERED INCORRECTLY PLEASE REMOVE ANY # or * -TRY AGAIN OP03	Perform System Check
OP05	Store memory full detected.	MEMORY CAPACITY EXCEEDED-PLEASE DIVIDE JOB AND RESEND OP05	Perform System Check
OP06	Communication data memory empty (Service mode only)	THERE IS NO INFORMATION AVAILABLE TO REPORT OP06	Perform System Check
OP10	Job card not detected in job reserve mode.	JOB CARD NOT DETECTED-PLEASE RELOAD JOB IN INPUT TRAY	Perform System Check
OP12	Unauthorized Job Card detected.	JOB CARD NUMBER DETECTED DOES NOT MATCH NUMBER IN JOB MEMORY-PLEASE MATCH OP12	Perform System Check
OP13	Start hole/information hole is too long.	JOB CARD IS WORN-PLEASE REPLACE WITH NEW JOB CARD OP13	Perform System Check
OP14	Bottom interval is too short.	JOB CARD IS WORN-PLEASE REPLACE WITH NEW JOB CARD OP14	Perform System Check
OP15	Hole interval is too long.	LONG ORIGINAL OR JAM DETECTED IN SCANNER-PLEASE REFER TO MANUAL. OP15	Perform System Check
OP22	No document detected in ADF.	NO ORIGINALS DETECTED-PLEASE RELOAD ORIGINALS AND TRY OPERATION AGAIN OP22	Perform System Check
OP23	Document is sensed by scan position sensor.	ORIGINAL DETECTED IN SCANNER-PLEASE REMOVE ORIGINAL FROM SCANNER OP23	Check scan output drive belt (RAP 2.3.11), scan position sensor (RAP 2.3.8); replace A2
OP24	Misfeed in ADF.	ORIGINALS OR JOB CARD DID NOT FEED PLEASE CLEAN FEED BELT & TRY AGAIN OP24	Check scan input drive belt (RAP 2.3.11), scan position sensor (RAP 2.3.8); replace A2
OP25	Document is too long or jammed.	LONG ORIGINAL OR JAM DETECTED IN SCANNER-PLEASE REFER TO MANUAL OP25	Perform System Check
OP32	Recording paper is low or empty. (Normal case)	RECORDING PAPER LOW-PLEASE REPLACE OP32	Check low paper sensor (RAP 2.3.8); replace A2
OP32	Recording paper is low or empty. (Special case)	RECEIVED DOCUMENT IN MEMORY RECORDING PAPER LOW-PLEASE REPLACE OP32	Check low paper sensor (RAP 2.3.8); replace A2
OP36	Recording paper remained by the jam sensor. (Normal case)	RECORDING JAM-CLEAR PAPER PATH OP36	Perform System Check
OP36	Recording paper remained by the jam sensor. (Special case)	RECEIVED DOCUMENT IN MEMORY RECORDING JAM-CLEAR PAPER PATH OP36	Check printer jam sensor (RAP 2.3.8), replace A2



<u>Code</u>	<u>Meaning</u>	<u>Display message</u>	<u>Corrective Action (after performing message)</u>
OP37	Recording paper did not reach the jam sensor. (Normal case)	RECORDING JAM-CLEAR PAPER PATH. OP37	Check printer belt (RAP 2.3.11), printer jam sensor (RAP 2.3.8), cutter switch (RAP 2.3.8); replace A2
OP38	Recording paper did not pass the jam sensor. (Normal case)	RECORDING JAM-CLEAR PAPER PATH. OP38	Perform System Check
OP64	DT (dial tone) not detected.	DIAL TONE NOT DETECTED-PLEASE CHECK TELEPHONE/LINE CONNECTORS-TRY AGAIN OP64	RAP 2.3.4
OP66	No answer from remote unit.	NO ANSWER-PLEASE CHECK NUMBER-TRY AGAIN OR CALL REMOTE OPERATOR OP66	Perform System Check
OP67	Line busy through N times redial attempted.	REDIALS COMPLETED-REMOTE STILL BUSY PLEASE TRY AGAIN-CHECK WITH REMOTE OPERATOR OP67	Perform System Check
OP68	Off-hook detected during auto dial.	TELEPHONE HANDSET IS OFF HOOK-PLEASE RESEAT HANDSET-REFER TO MANUAL OP68	Perform System Check
OP70	Security I.D. not matched.	UNABLE TO COMPLETE OPERATION SECURE ID MISMATCH OR STOP PRESSED AT REMOTE OP70	Perform System Check
OP71	Remote unit unable to transmit. (No document in ADF or polled mode is off)	UNABLE TO RECEIVE-REMOTE NOT READY PLEASE CHECK WITH REMOTE OPERATOR OP71	Perform System Check
OP73	Remote unit unable to receive. (No record paper or paper jam)	REMOTE CANNOT RECEIVE-PLEASE CHECK WITH REMOTE OPERATOR OR TRY AGAIN OP73	Perform System Check
OP74	Operator did not respond to recall (configuration 6 only)	REMOTE NOT RESPONDING TO VOICE REQUEST PLEASE CALL REMOTE OPERATOR OP74	Perform System Check
OP77	(G3 TX/RCV) Remote terminal sent DCN.	UNABLE TO COMPLETE OPERATION-SECURE ID MISMATCH OR STOP PRESSED AT REMOTE OP77	Perform System Check
OP78	Operator did not respond to voice request. (PIP/PIN with a DCN)	REMOTE NOT RESPONDING TO VOICE REQUEST PLEASE CALL REMOTE OPERATOR OP78	Perform System Check
OP80	Scanner cover open.	SCANNER COVER IS OPEN-PLEASE CLOSE COVER OP80	Check scan interlock switch (RAP 2.3.8); replace A2
OP81	Printer cover open.	PRINTER COVER IS OPEN-PLEASE CLOSE COVER OP81	Check printer interlock switch (RAP 2.3.8); replace A2

## 2.3 Status Indicator RAPS

### RAP 2.3.1 One Or Both LEDs of Power Supply Are Off.

1. At least one LED is on.  
Y N  
| Go to Step 9.
2. Disconnect power cord from terminal. Remove LH cover. Reconnect power cord to terminal. Remove black plastic fastener in upper left corner of EME shield. Pull EME shield away from CNC A0 PWB. Connect jumper from TP-LG to TP41 on CNC A0 PWB (Figure 1). Both LEDs of power supply come on.  
Y N  
| RAP 2.3.2.

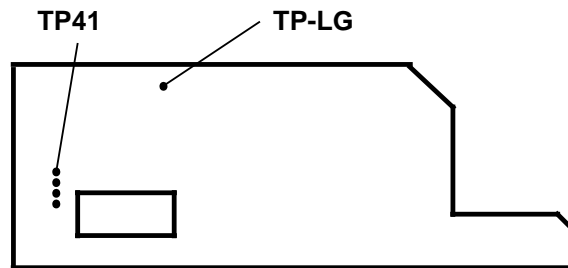


Figure 1.

7017-107

3. Replace A2. Problem resolved.  
Y N  
| Go to Step 5.
4. Go to Final Actions.

5. Replace A6. Problem resolved.  
Y N  
| Go to Step 7.
6. Go to Final Actions.
7. Replace A10. Problem resolved.  
Y N  
| Call for assistance.
8. Go to Final Actions.
9. Fuse F1 has been replaced (on this call).  
Y N  
| Go to Step 13.
10. Remove the power supply fuse F1. Check fuse resistance. Meter reads less than 10 ohms.  
Y N  
| Replace power supply assembly.
11. Perform Load Isolation RAP 2.3.2. Problem resolved.  
Y N  
| Call for assistance.
12. Go to Final Actions.

### WARNING

Improper connection of the grounding conductor can result in the risk of electrical shock. The following must be observed:

- Never use a ground adapter plug to connect the terminal to a power source which does not have a ground connection.
- Never attempt any maintenance function which is not specifically called out in the service procedures.
- Never remove any covers which are fastened with screws, unless so instructed in the service procedures.

### CAUTION

If any of the voltage measurements are not as specified in the following steps, the cause must be corrected. Caution the customer not to connect the terminal to the wall outlet. Advise the customer that a licensed electrician must correct the wiring. Do not attempt to correct the wiring yourself. If you later find the condition has not been corrected, inform your manager in writing of the improper wiring.

13. Perform the following line voltage check.

- a. Disconnect power cord from the wall outlet.
- b. **USO:** Measure the AC voltage between AC Hot and Neutral. Meter = 107 to 127 VAC (Figure 2).

**RX UK Only:** Measure the AC voltage between live and neutral and between live and earth. Meter = 196 to 264 VAC (Figure 3).

**RX Europe Only:** Measure the AC voltage between pin. Meter = 200 to 240 VAC (Figure 4).

- c. **USO:** Measure the AC voltage between the AC Neutral and GND. Meter = less than 3 VAC (Figure 2).

**RX, UK Only:** Measure the AC voltage between Neutral and Earth. Meter = less than 3 VAC (Figure 3).

**RX, Europe Only:** Measure the AC voltage between supply pin and earth. Meter = 200 to 240 VAC (Figure 4).

Y N  
| Inform customer of insufficient voltage (or improper wiring).

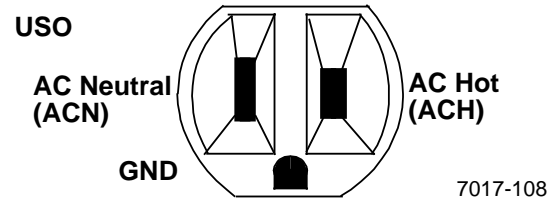


Figure 2. USO Wall Outlet

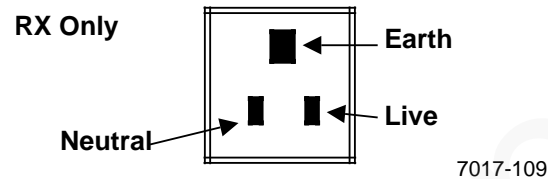


Figure 3. RX UK Wall Outlet

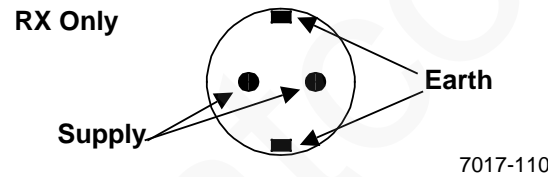


Figure 4. RX Europe Wall Outlet

14. Remove the power cord from terminal. Place the black and red meter leads at the corresponding female and male connectors of each wire within the power cord. Meter reads less than 10 ohms.

Y N  
| Replace power cord.

15. Remove the power supply fuse F1. Check fuse resistance. Meter reads less than 10 ohms.

Y N  
| Replace fuse.

16. Reinstall fuse. Ensure power cord is disconnected from terminal. Remove power supply from terminal. Place power supply on insulated surface. Connect jumper across pins of J3 (Figure 5). Connect power cord from wall outlet to power supply. Both LEDs of power supply come on.

Y N  
| Replace power supply assembly.

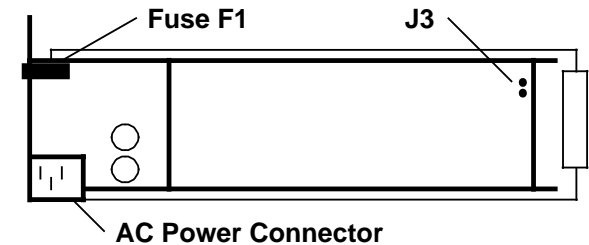


Figure 5.

17. Remove jumper from J3 and reinstall power supply. Perform Load Isolation RAP 2.3.2. Problem resolved.

Y N  
| Call for assistance.

18. Go to Final Actions.

## RAP 2.3.2 Load Isolation

*Note: Perform this procedure to isolate a power loading problem.*

1. Ensure power cord is disconnected from power supply. Remove A2 from terminal with A5, and A10, and (if applicable) A8 attached. Connect power cord from wall outlet to terminal. Remove black plastic fastener in upper left corner of EME shield. Pull EME shield away from A0 CNC PWB. Connect jumper from TP-LG to TP41 on A0 CNC PWB (Figure 1). Both LEDs of power supply come on.

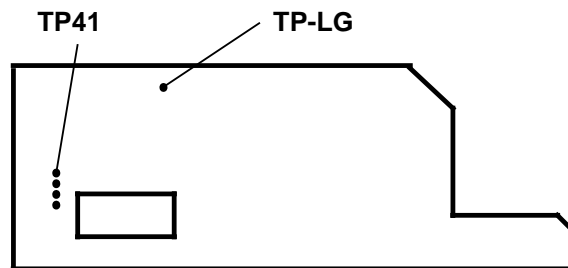
**Y N**

| **Go to Step 6.**

2. Disconnect power cord from terminal. Remove all PWBs from A2. Reinstall A2. Connect power cord from wall outlet to terminal. Both LEDs of power supply come on.

**Y N**

| **Replace A2.**



**Figure 1.**

7017-112

*Note: Ignore any display fault codes which may appear during this procedure.*

3. Disconnect power cord from terminal. Reinstall one of the PWBs removed in Step 2. Connect power cord to terminal. Both LEDs of power supply come on.

**Y N**

| **Replace last PWB reinstalled.**

4. All PWBs removed in Step 2 reinstalled.

**Y N**

| **Repeat step 3.**

5. Go to Final Actions.

6. Disconnect power cord from terminal. Reinstall A2 with A5, and A10, and (if applicable) A8 attached. Disconnect P/J 123. Connect power cord from wall outlet to terminal. Both LEDs of power supply come on.

**Y N**

| **Go to Step 8.**

7. Replace video assembly.

8. Disconnect power cord from terminal. Disconnect P/J 120. Connect power cord from wall outlet to terminal. Both LEDs of power supply come on.

**Y N**

| **Go to Step 10.**

9. Replace thermal head.

10. Disconnect power cord from terminal. Disconnect P/J 111. Connect jumper from TP-LG to TP41 on CNC A0 PWB (Figure 1). Connect power cord from wall outlet to terminal. Both LEDs of power supply come on.

**Y N**

| **Go to Step 12.**

1. Replace A6 (control panel assembly).

12. Disconnect all other connectors on CNC A0 PWB one at a time. (Disconnect power cord before disconnecting each connector, then reconnect the power cord.) When both LEDs of power supply come on, refer to wiring data to trace last connector disconnected to a replaceable part. Replace the part, reconnect all connectors disconnected in this procedure, and perform System Check to verify the repair.

### RAP 2.3.3 Diagnostic Pattern Is Unacceptable

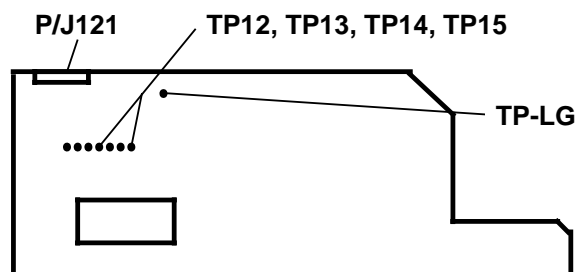
*Note: If possible, obtain from Customer any copies of unacceptable quality related to this call.*

1. Copy (from Customer or from System Check) shows damage from excessive thermal head heat (holes in paper, odor, discoloration on reverse side, etc.).

**Y N**

**| Go to Step 12.**

2. Disconnect power cord from terminal. Remove LH cover.
3. Remove black plastic fastener in upper left corner of EME shield. Pull EME shield away from A0 CNC PWB.
4. Disconnect P/J121 from A0 CNC PWB (Figure 1).



**Figure 1.**

7017-113

5. Connect the black meter lead to TP-LG (Figure 1).
6. Connect power cord to terminal.
7. Connect the red meter lead to one of the test points listed in Figure 1 (TP12, TP13, TP14, TP15).

8. Perform auto diagnostics.
  - a. Press Menu.
  - b. Press 2 on keypad.
  - b. Press 4 on keypad.
9. Meter reads greater than 3.5 VDC during printing.
10. Repeat Step 6 through 8 until all test points listed in Figure 1 have been checked. All test point voltages are correct.

**Y N**  
**| Replace both A2 AND thermal head assembly.**
11. Replace thermal head.
12. Perform RAP 2.3.6. Problem resolved.

**Y N**  
**| Replace A2, thermal head assembly.**
13. Return to procedure which directed you to this RAP or go to Final Actions.

### RAP 2.3.4 Dial Tone Is Not Heard

1. Display indicates:

<b>DIAL TONE NOT DETECTED-PLEASE CHECK TELEPHONE /LINE CONNECTORS-TRY AGAIN OP64</b>
--

**Y N**

**| Go to Step 4.**

2. Disconnect the handset from terminal. Disconnect the data cable from the telephone wall jack. Plug the handset into the telephone wall jack. Dial tone is heard.

**Y N**  
**| Inform Customer of telephone line problem.**
3. Reseat connectors, then replace data cable, A10.
4. Replace A10, A2.

### RAP 2.3.5 The Terminal Does Not Answer.

1. Phone rings (but does not answer).

Y N

| Go to Step 3.

*RX NOTE: Check manual receive is not selected. Check all Autodialer and System Data parameters are set correctly (switches, links and System Data) for your particular country.*

2. Replace A10, A2.
3. Disconnect the handset from the terminal. Disconnect the data cable from the telephone wall jack. Plug the handset into the telephone wall jack. Dial tone is heard.  
Y N  
| Inform Customer of telephone line problem.
4. Reseat connectors, then replace data cable, A10.

### RAP 2.3.6 Mechanical Checkout.

*NOTE: The following checks apply to all belts, gears, pulleys, springs and bearings in these areas:*

- Front and Rear Frames.
- Upper and Lower Scanner.
- Upper and Lower Printer.

1. Remove LH cover.
2. Inspect all drive belts. Belts are in good condition (not broken, frayed and do not have surface cracks).  
Y N  
| Replace belt.
3. Inspect all shafts. Shafts turn freely.  
Y N  
| Replace shaft and bearings.
4. Inspect all bearings. Bearings are secure on shafts and positioned properly in frame cutouts.  
Y N  
| Position bearings in frame cutouts, replace bearings.
5. Inspect pulleys. Pulleys are secure on shafts and are not broken.  
Y N  
| Replace pulley or E-ring.
6. Inspect upper scanner. Upper scanner closes and latches.  
Y N  
| Replace latch spring, latches.
7. Inspect upper printer. Upper printer closes and latches.  
Y N  
| Replace latch spring, latches or printer frame.

8. Inspect hold down springs on scanner shaft bearings. Springs are secure on bearings and shafts turn freely.

Y N

| Replace springs.

9. Inspect gears. Gears are secure on shafts and are not broken. Gears mesh properly.

Y N

| Tighten set screw in gear or replace gear or E-rings.

10. Return to procedure which directed you to this RAP or go to Final Actions.

## RAP 2.3.7 Paper Feed Test

*NOTE: Refer to Figure 1 on the next page for a diagram of the print drive system.*

1. Enter Service Mode.
2. Perform the Paper Feed Test.
  - a. Press Menu.
  - b. On the key pad, press 7 then 1. The display indicates:

71	RECORD PAPER FEED TEST PRESS [START] OR [SCROLL]
----	---

### CAUTION

*To prevent possible damage to the thermal head, do not perform this test without paper. (Test will not start if low paper condition has been detected.)*

- d. Press Start.
3. Paper feeds without a paper jam.  
Y N  
| **RAP 2.3.6.**
4. Press Stop to end test.
5. Return to procedure which directed you to this test or go to Final Actions.

## RAP 2.3.8 Sensor Test

1. Enter Service Mode.

*NOTE: OP32, OP36, and OP38 do not display a flashing top line if A8 PWB is not installed.*

2. Perform Sensor Test.
  - a. Press Menu.
  - b. On the key pad, press 7 then 6. The display indicates:

76	SENSOR TEST PRESS [START] OR [SCROLL]
----	--

- c. Press Start. The display indicates (sample):

SC	PC	DS	B4	A4	PJ	CP	SP	LP	4P	R	H	F
L	L	L	L	H	L	H	H	H	L	H	H	

3. Perform a copy operation or manually actuate suspect sensor. Observe display. Displayed code for suspect sensor changes state (from H to L or L to H). Refer to Table 1.

**Table 1. Sensor Code**

SC	Scan interlock switch
PC	Printer interlock switch
DS	Document sensor
B4	Wide Original sensor
A4	A4 document sensor (FX only)
PJ	Printer Jam Sensor
CP	Cutter switch
SP	Scan position sensor
LP	Low paper sensor
4P	Wide paper sensor (FX, RX only)

R	Ring Indicator
H	Hook Signal
F	Fax Net Ring Indicator (FX only)

Y N  
| **Replace applicable sensor.**

4. End test.
  - a. Enter diagnostics mode (Section 6).
  - b. Exit diagnostics mode (Section 6).
5. Return to procedure which directed you to this test or go to Final Actions.



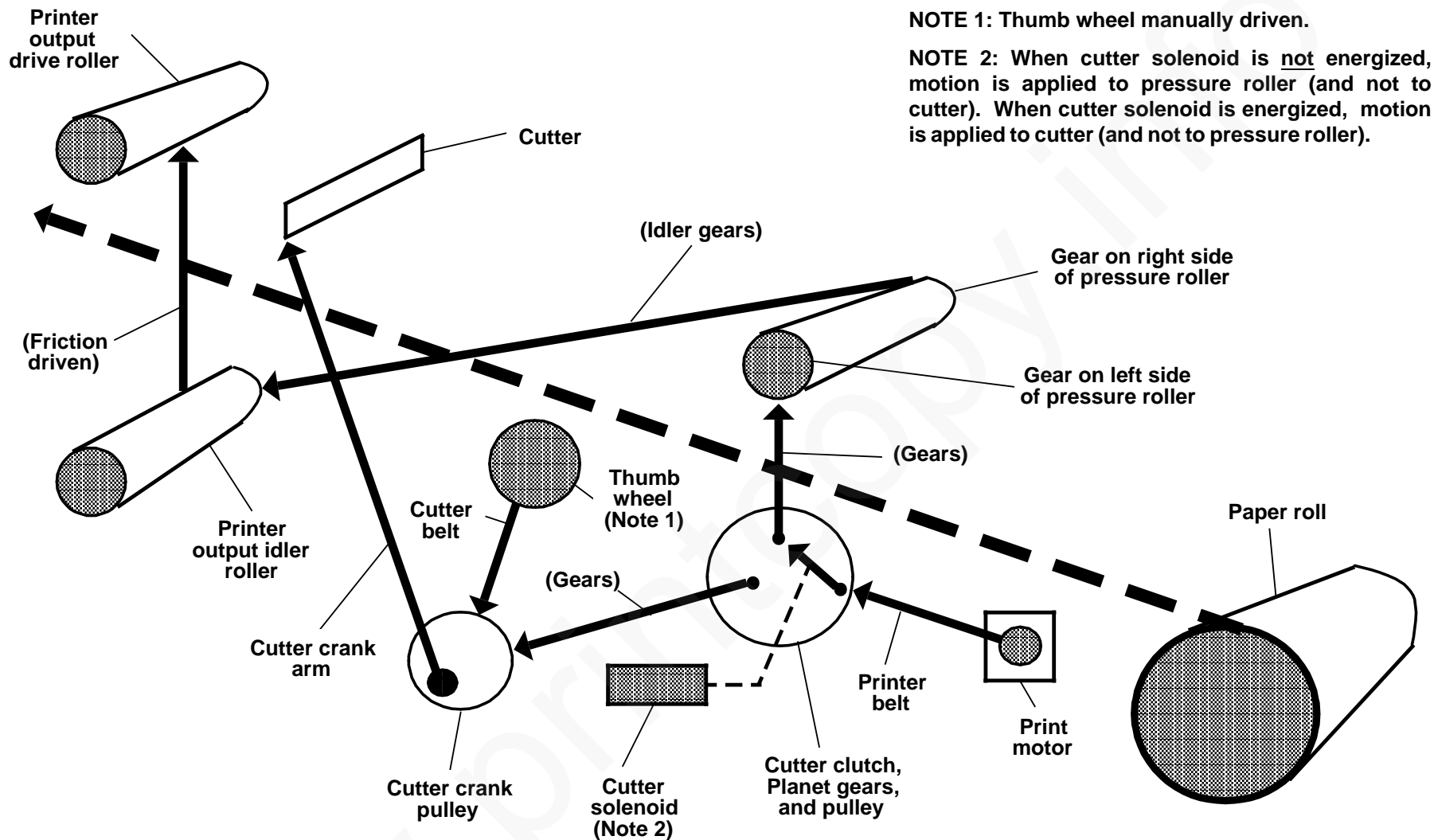


Figure 1. Print Drive System (Viewed from Left Side)

7017-105

## RAP 2.3.9 Scanner Test

*NOTE: Refer to Figure 1 on the next page for a diagram of the scan drive system.*

1. Open scanner.
  2. Clean platen roller, scan idler and scan drive rollers, and retard pad. (Refer to 1.4.1 Call Completion in Section 1 for cleaning procedure.)
  3. Inspect tension on scan idler rollers and the platen roller.
    - a. Press the end of each roller at the front and rear.
    - b. The tension should feel the same at the left and right.
- Y N**  
**| Replace springs.**
4. Problem resolved:  
**Y N**  
**| RAP 2.3.6.**
  5. Return to procedure which directed you to this test or go to Final Actions.

## RAP 2.3.10 Automatic Document Feeder Test

1. Open Scanner.
2. Inspect ADF Belt. Belt is clean and undamaged.  
**Y N**  
**| Clean or replace belt.**
3. Inspect one way clutch by pushing the ADF belt toward the front. Clutch allows belt to rotate freely.  
**Y N**  
**| Replace clutch.**
4. Rotate belt toward the rear. Clutch does not allow belt to rotate.  
**Y N**  
**| Replace clutch.**
5. Inspect document guides by extending guides to maximum and minimum width. Guides move freely and are parallel.  
**Y N**  
**| Replace Input Tray.**
6. Enter Service Mode.
7. Place at least three sheets of paper (multiple originals) into input tray.
8. Enter Original Feed Test.
  - a. Press Menu.
  - b. On the key pad, press 7 then 2. The display indicates:

72	<b>ORIGINAL FEED</b> <b>PRESS [START] OR [SCROLL]</b>
----	--

9. Press Start.
10. Originals feed one sheet at a time.  
**Y N**  
**| RAP 2.3.6.**
11. Press Stop to end test.
12. Return to procedure which directed you to this check or go to Final Actions.

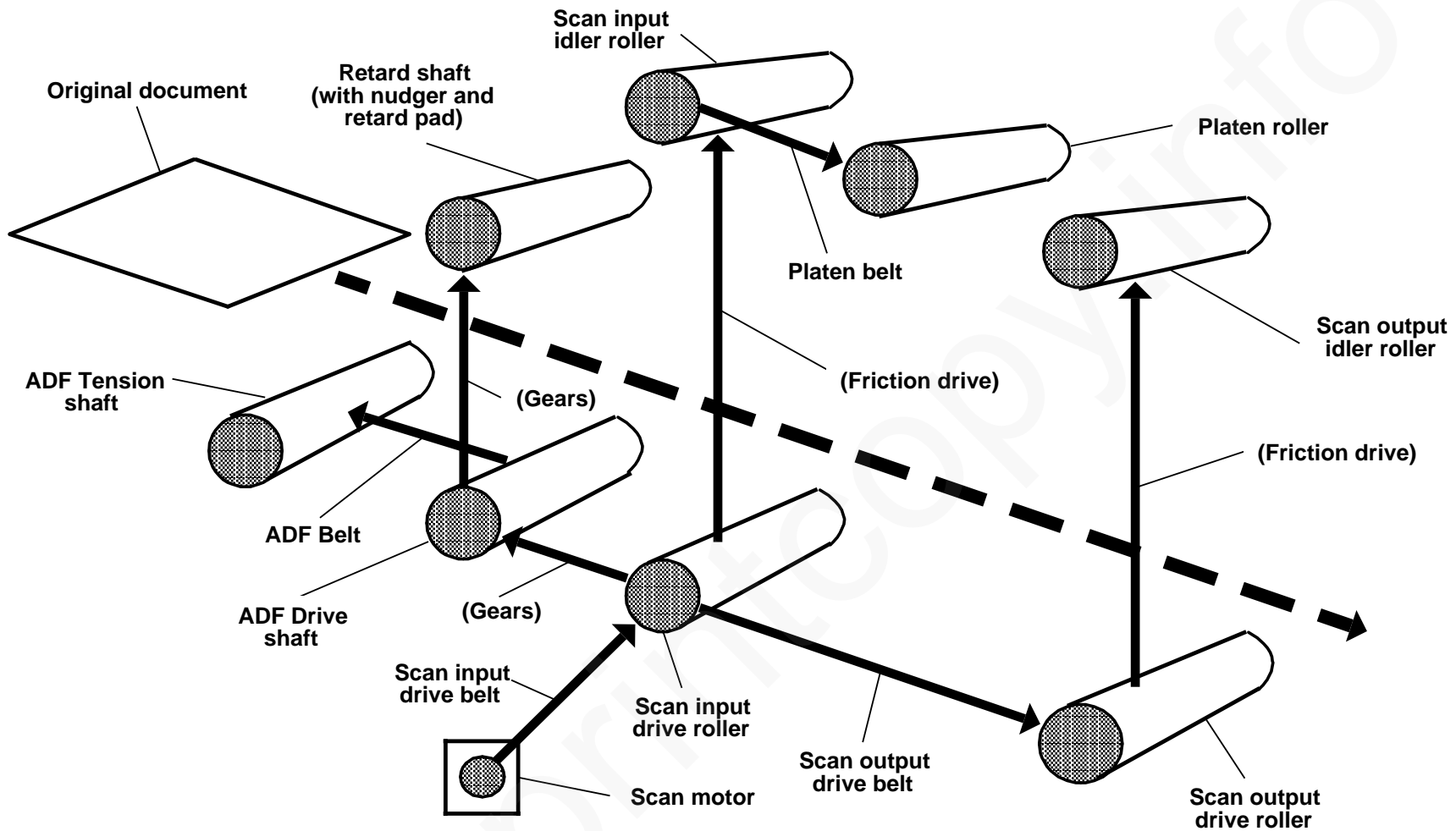


Figure 1. Scan Drive System (Viewed from Left Side)

7017-106

### RAP 2.3.11 Belt Checkout.

*NOTE: The following check applies to all belts.*

1. Remove covers and parts as necessary to access the belt. (Refer to Section 4 and Section 5.)
2. Inspect the belt. Belt is in good condition (not broken, frayed and does not have surface cracks).  
**Y N**  
**| Replace belt.**
3. Return to procedure which directed you to this test or go to Final Actions.

### RAP 2.3.12 Both LEDs remain on.

1. The display indicates:

<b>DIAL TELEPHONE NUMBER OR WHEN READY - PRESS [MANUAL RCV]</b>
---

- Y N**  
**| Replace A2, power supply assembly.**
2. Lift handset from handset cradle. Press switch on handset. Handset is silent (no dial tone).  
**Y N**  
**| Replace handset.**
  3. Replace A2, A10.

### RAP 2.3.13 Received Image Quality is Unacceptable.

*NOTE: This procedure applies to image quality problems either:*

- Received at the local terminal and sent by a remote terminal, or
- Received at a remote terminal and sent by the local terminal.

1. Replace A10. Problem resolved.  
**Y N**  
**| Go to Step 3.**
2. Go to Final Actions.
3. Replace A2. Problem resolved.  
**Y N**  
**| Go to Step 5.**
4. Go to Final Actions.
5. Call the Facsimile Technical Support Center (TSC). Request to receive (not in Error Correct mode) from their terminal. Image quality is acceptable. (Refer to Section 3 for image quality.)  
**Y N**  
**| Inform Customer of telephone line problem.**
6. Go to Final Actions.

## 3. Image Quality

- Introduction [3-2](#)

### Image Quality Samples

- IQ 1.1a Diagnostic Test Pattern (Upper Half) [3-3](#)
- IQ 1.1b Diagnostic Test Pattern (Lower Half) [3-4](#)
- IQ 1.2 Test Pattern 82P151 [3-5](#)
- IQ 1.3 Test Pattern 82P151 (Wide Original) [3-6](#)
- IQ 1.4 Noise on Line, non-ECM [3-7](#)
- IQ 1.5 Noise on Line, ECM or non-ECM [3-8](#)
- IQ 1.6 Modem Noise [3-9](#)

## Section Introduction

The Image Quality (IQ) section is used to identify an image quality problem. It contains this Introduction and Image Quality samples.

These samples are reproductions of acceptable image quality of the Diagnostic Test Pattern (generated by the terminal) and Test Pattern 82P151 (copied on the terminal). Samples of telephone line noise and modem noise are also included.

Use the Image Quality Samples as a comparison to identify any image quality defects which may have been produced during System Check.

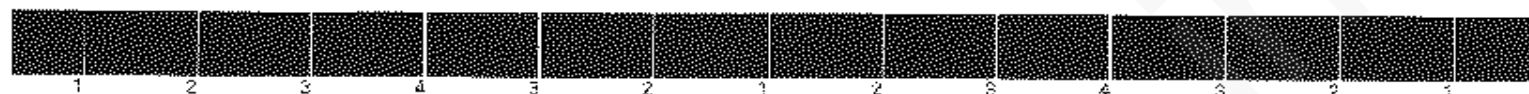
7017-100

[illegible]



## IQ 1.1b Diagnostic Test Pattern (Lower Half)

### IQ 1.1b Diagnostic Test Pattern (Lower Half)



! " # \$ % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ \_ ` a b c  
d e f g h i j k l m n o p q r s t u v w x y z { | } ~ - ! " # \$ % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ \_ ` a b c  
" ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ \_ ` a b c  
@ # \$ % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ \_ ` a b c  
L M N O P Q R S T U V W X Y Z [ \ ] ^ \_ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { | } ~ - ! " # \$ % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ \_ ` a b c

1 9 inch

1 230 mm

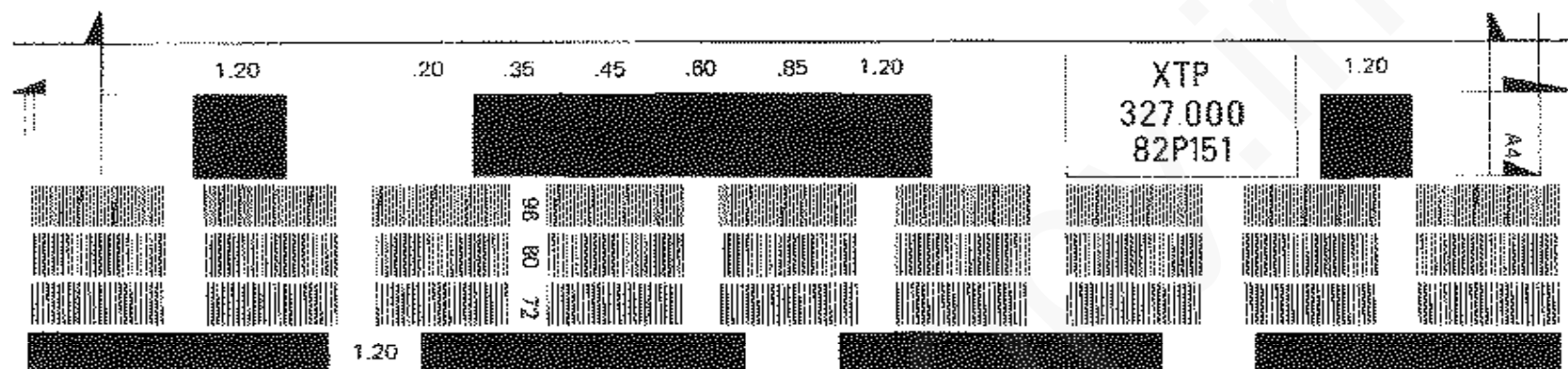
1 12 inch

1 310 mm

7017-101

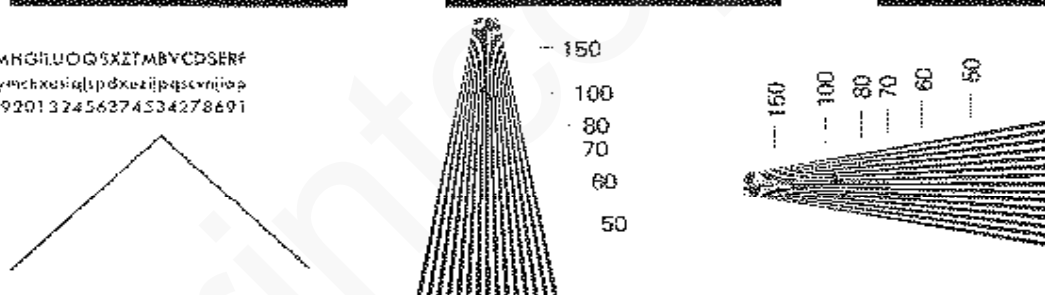
# IQ 1.2 Test Pattern 82P151

## IQ 1.2 Test Pattern 82P151



8 POINT FUTURA MEDIUM  
 E J D S I C M O R Q Z X L A B N Z L S W Y N K M H G I U O Q S X Z T M B V C D S E F  
 c d g h e a z l r a b w c j p d s a k o l e h f a r e j y m c h x u s i q l p d x e z i j p q s c v n i o p  
 839475821638950632846573920132456374534278691

4 POINT FUTURA MEDIUM  
 definition of character legibility.  
 ABILITY TO recognize CHARAC-  
 TERS ON THEIR OWN MERIT  
 without REFERENCE TO OR asso-  
 ciation WITH ADJACENT charac-  
 ters.



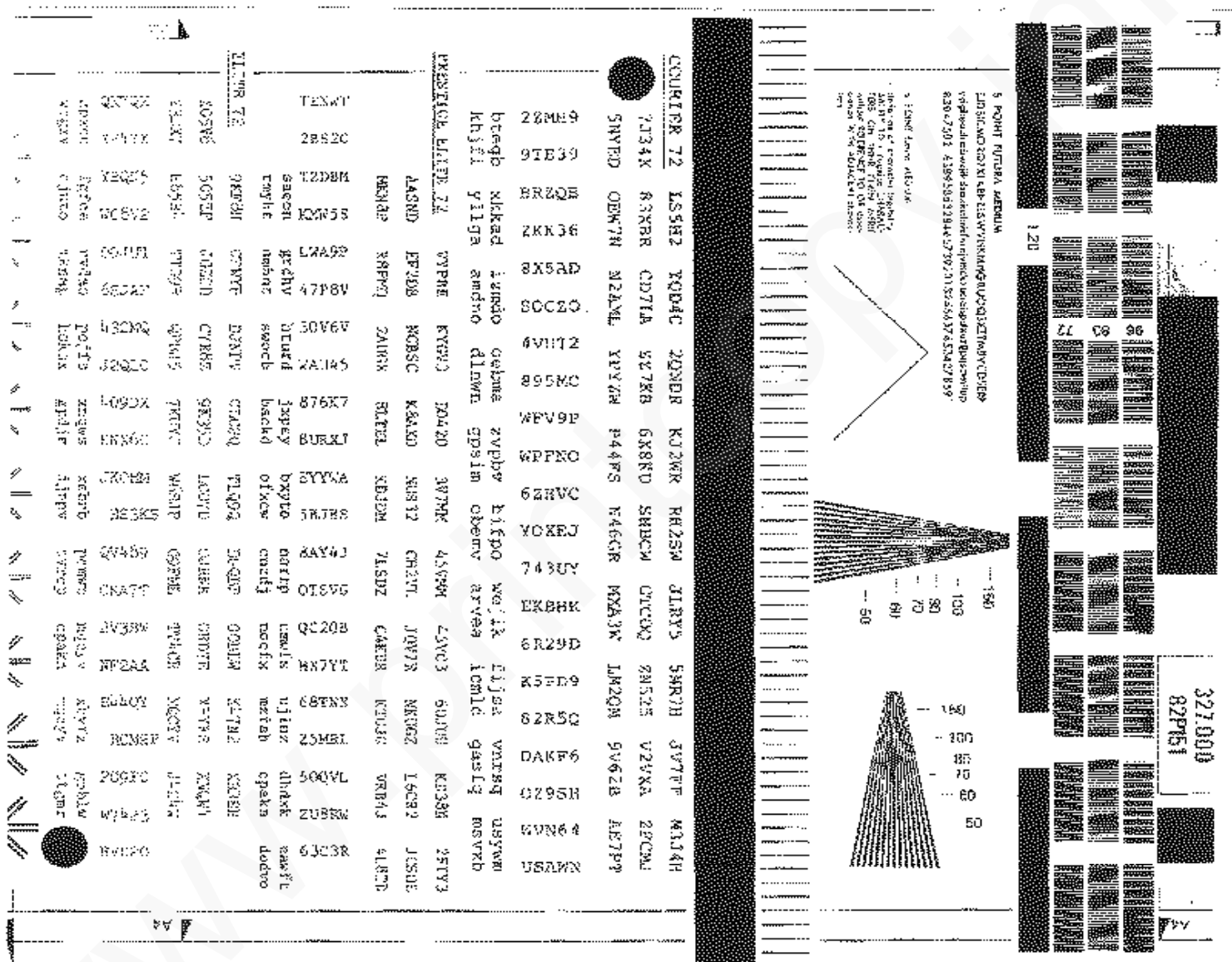
DEFINITION OF WORD LEGIBILITY: CAPABLE OF BEING READ OR DECIPHERED, PARTICULARLY IN PERCEIVING LETTERS AND WORDS IN THE READING OF CONTINUOUS TEXTUAL MATERIAL.

COURIER 72	LS5H2	YQD4C	2QNDR	KJ2WR	RH2SW	JLRY5	5MR7H	JV7FF	M3J4H
7J34X	83XBR	CD7LA	ZZ7KB	6X8KU	SHBCW	GTCOQ	ZN525	V2VXA	ZFCMJ
5NYED	OE7N	N2AML	YPYZW	P44FS	N46GR	MXA3W	LM2QM	9V62B	AE7PT
2ZMH9	9TE39	BRZQB	ZKK36	8XSAD	SOCZO	4VUT2	895MC	WV9P	WPFNO
6ZHV	YOXEF	743UY	EKBHK	6R29D	K5PD9	82R5Q	DAKF6	O29SR	WVNG4
USAWN									

7017-102

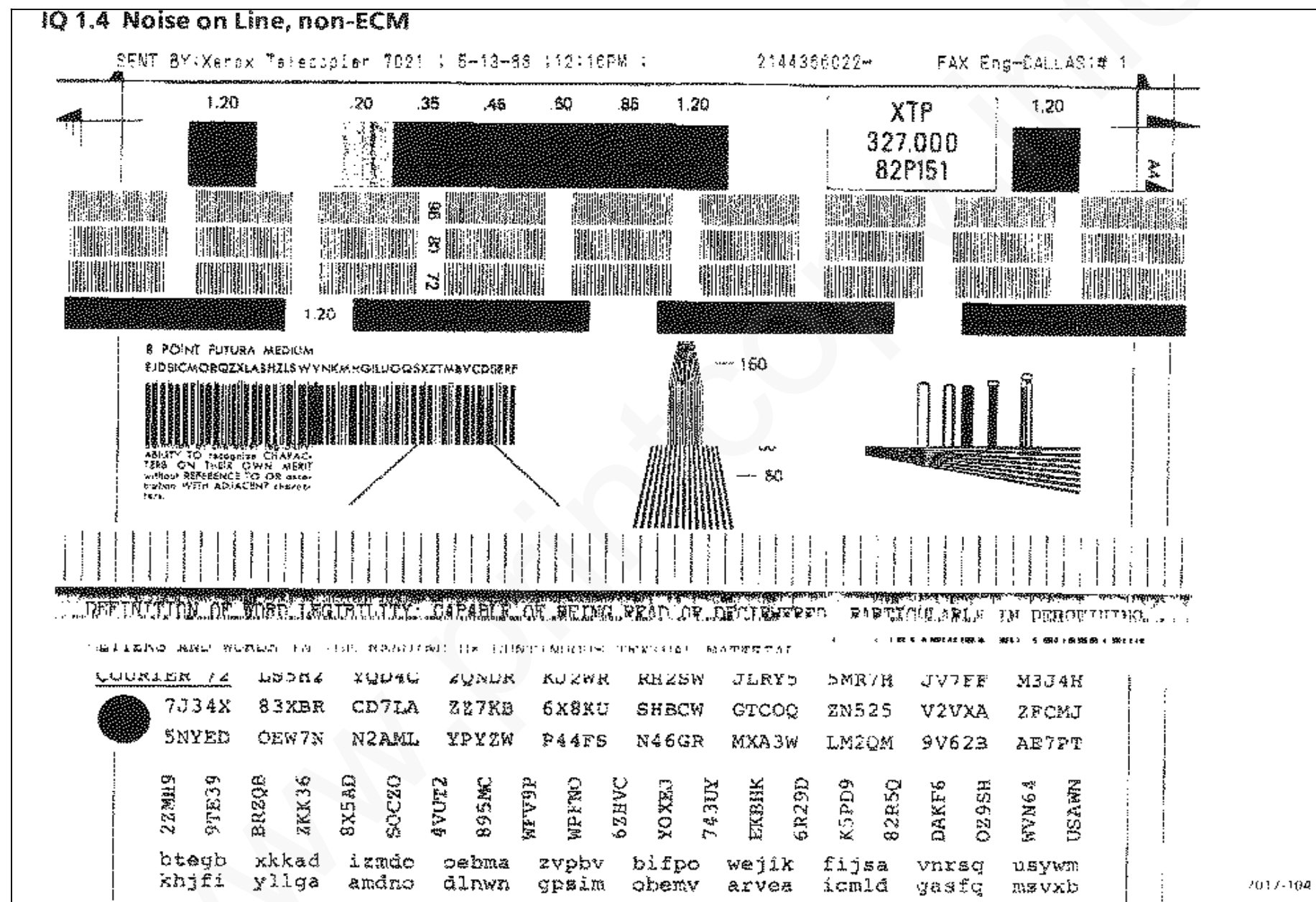
# IQ 1.3 Test Pattern 82P151, Wide Original

## IQ 1.3 Test Pattern 82P151, Wide Original



7017-103

# IQ 1.4 Noise on Line, non-ECM





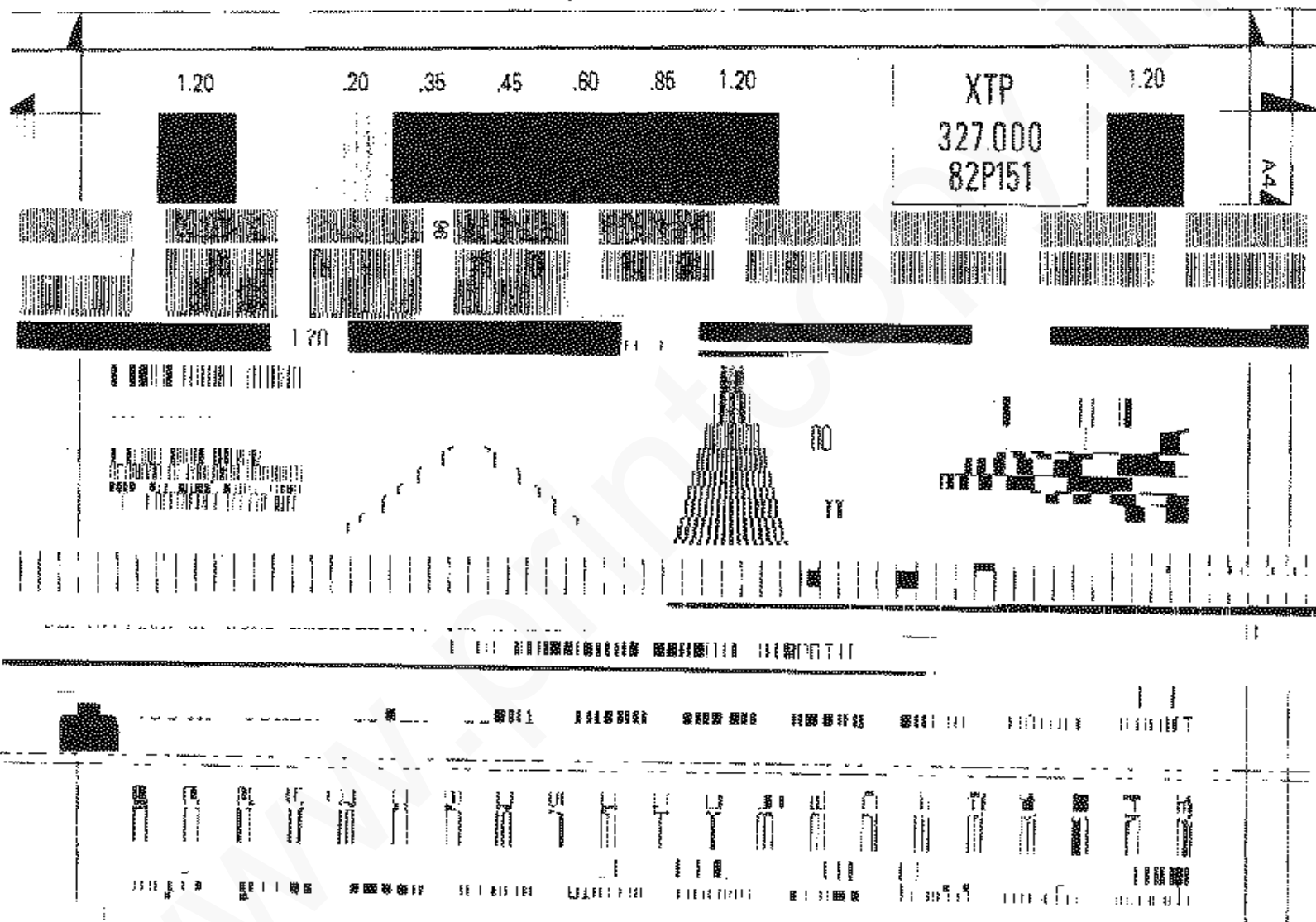
# IQ 1.5 Noise on Line, ECM or non-ECM

## IQ 1.5 Noise on Line, ECM or non-ECM

SENT BY: Xerox Telecopier 7017 : 4-25-88 : 3:24PM :

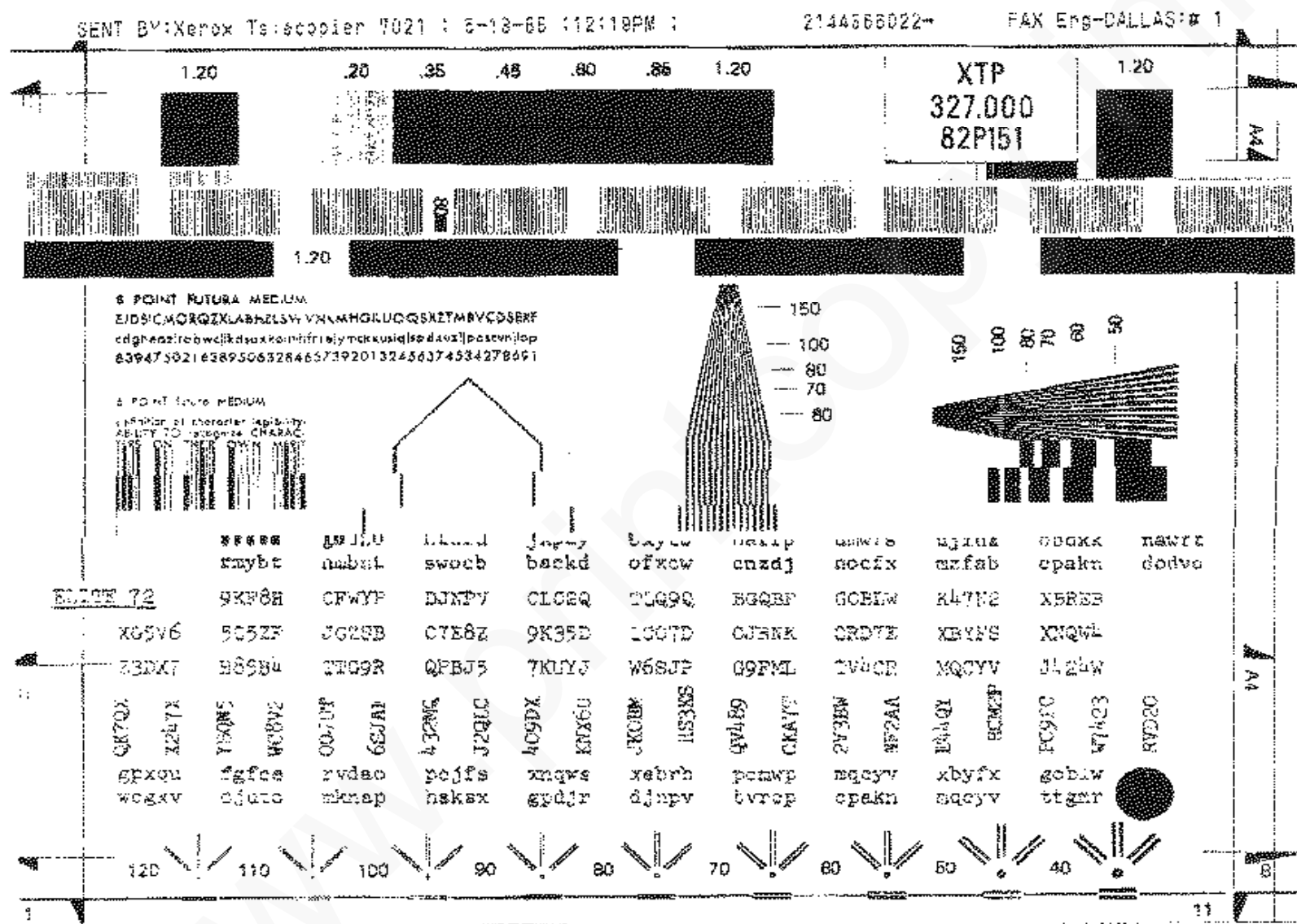
2144366022-

FAX Eng-CALLAS# 1



## **IQ 1.6 Modem Noise**

## IO 1.6 Modem Noise



## 4. Repair / Adjustment

- Introduction [4-2](#)

### Covers and Panels

- REP 1.1 Document Catch Tray Assembly [4-3](#)
- REP 1.2 RH Cover [4-3](#)
- REP 1.3 Coupler Cover [4-4](#)
- REP 1.4 LH Cover [4-4](#)
- REP 1.5 Output Tray Assembly [4-4](#)
- REP 1.6 Rear Cover [4-5](#)
- REP 1.7 Upper Scan Cover [4-5](#)
- REP 1.8 Lower Scan Cover [4-5](#)
- REP 1.9 Input Tray / Printer Cover Assembly [4-6](#)
- REP 1.10 Input Tray Extension [4-6](#)
- REP 1.11 Paper Side Plates [4-6](#)

### ADF

- REP 2.1 Retard Assembly [4-7](#)
- REP 2.2 Nudger Timing Gear [4-7](#)
- REP 2.3 Pad Assembly [4-8](#)
- REP 2.13 Nudger Solenoid Assembly [4-14](#)
- REP 2.14 Nudger Pawl and Nudger Pawl Spring [4-15](#)

### Scanner

- REP 3.1 Scan Position Sensor [4-15](#)
- REP 3.2 Scan Interlock Switch [4-16](#)
- REP 3.3 Scan Input Idler Roller [4-17](#)
- REP 3.4 Platen Roller [4-17](#)
- REP 3.5 Scan Output Idler Roller [4-18](#)
- REP 3.6 Upper Scan Assembly [4-18](#)
- REP 3.7 Video Assembly [4-19](#)
- REP 3.8 Scan Pulley / Gear [4-20](#)
- REP 3.9 Scan Input Drive Roller [4-20](#)
- REP 3.10 Scan Output Drive Roller [4-21](#)
- REP 3.11 Scan Output Drive Pulley [4-21](#)
- REP 3.12 Scan Motor [4-22](#)



## Printer

- REP 4.1 Low Paper Sensor and RX: Wide Paper Sensor [4-23](#)
- REP 4.2 Printer Jam Sensor [4-24](#)
- REP 4.3 Printer Interlock Switch [4-24](#)
- REP 4.4 Recording Paper Supply Indicator [4-25](#)
- REP 4.5 Lower Paper Guide Assembly [4-26](#)
- REP 4.6 Printer Motor Cover [4-26](#)
- REP 4.7 Upper Printer Assembly [4-27](#)
- REP 4.8 Printer Output Idler Rollers [4-28](#)
- REP 4.9 Cutter [4-29](#)
- REP 4.10 Printer Output Drive Roller [4-30](#)
- REP 4.11 Pressure Roller Assembly [4-31](#)
- REP 4.12 Thermal Head Assembly [4-32](#)
- REP 4.13 Cutter Crank Arm [4-33](#)
- REP 4.14 Cutter Cam [4-33](#)
- REP 4.15 Printer Motor [4-34](#)
- REP 4.16 Cutter Belt [4-35](#)
- REP 4.17 Cutter Switch [4-35](#)
- REP 4.18 Cutter Home Lever and / or Cutter Home Spring [4-36](#)
- REP 4.19 Planetary Assembly [4-37](#)
- REP 4.20 Cutter Crank Pulley [4-38](#)
- REP 4.21 Cutter Clutch [4-38](#)
- REP 4.22 Cutter Solenoid Assembly [4-39](#)
- REP 4.23 Cutter Solenoid Lever [4-40](#)
- REP 4.24 Printer Belt [4-41](#)

## Electronics

- REP 5.1 A6 Control Panel and / or Control Panel Assembly [4-42](#)
- REP 5.2 Speaker Assembly [4-43](#)
- REP 5.3 Fan [4-43](#)
- REP 5.4 A8 Store & Forward PWB [4-44](#)
- REP 5.5 A2 Main PWB [4-44](#)
- REP 5.6 Power Supply Assembly [4-45](#)
- REP 5.7 A3 Telephone Line Filter PWB [4-46](#)

#### 4. Repair / Adjustment

- REP 5.8 A5 Modem PWB [4-46](#)
- REP 5.9 A10 Coupler PWB [4-47](#)
- REP 5.10 CNC PWB Assembly [4-47](#)

#### Electronics

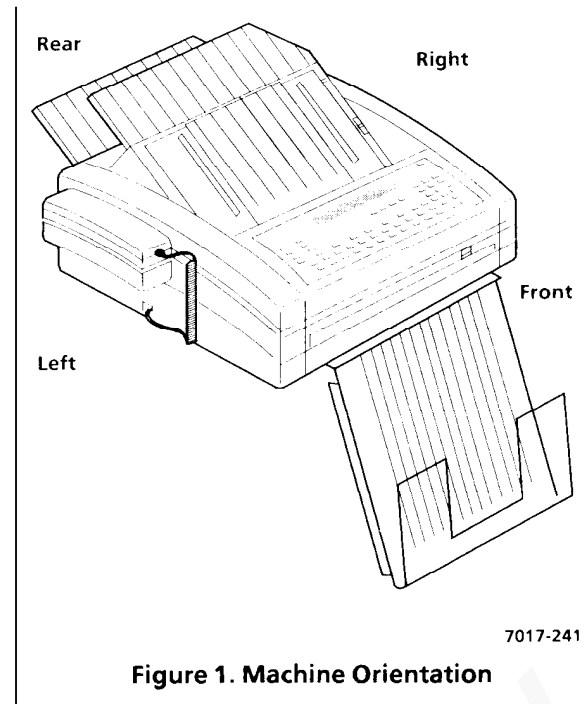
- ADJ 5.1 Cutter Registration [4-48](#)
- ADJ 5.2 Scan Registration [4-52](#)

# Introduction

## Overview

The Repair / Adjustment section contains the removal, replacement, and adjustment procedures for most components and assemblies.

Refer to Figure 1 below in order to assist you with references to left, right, front, and rear in the procedures.



## Organization

Section contents gives page references for all procedures in the repair / adjustment section.

Repair contains the removal and replacement procedures for many parts shown in the Parts List. If a component procedure cannot be found in this section, it usually means that Removal or Replacement procedures are obvious; the part or assembly is not spared and cannot be ordered; or the part does not need to be removed, replaced, or adjusted.

All removal replacement procedures are listed first. They are then followed by all the adjustment procedures.

### Removal

Removal contains step-by-step removal procedures for a specific component part or assembly.

Illustrations are provided in some adjustments in order to assist you with the procedures. You should refer to the specific parts list illustration (listed under the repair title) for locating most components within a procedure.

## Replacement

Replacement contains procedures to reinstall or replace a component part or assembly and those components or assemblies removed during the removal process.

If a replacement procedure should be completed in the exact reverse order of removal, a generic replacement statement is provided.

If you are in one replacement procedure and are directed to go to another procedure to reinstall a component, reinstall that component then return to the original procedure that directed you there. Do not continue through and reinstall every component listed in the procedure that you referenced. The best sequence for replacing each component removed in the original procedure is listed in the original procedure.

### Adjustment

Adjustment contains the adjustment procedures for component parts or assemblies. It also contains a functional check of the component part or assembly.

## REP 1.1 Document Catch Tray Assembly

### Parts List on PL 1.1

#### Removal

Pull document catch tray assembly straight forward to remove.

#### Replacement

1. Align positioning slots on document catch tray assembly with the two channels on base plate.
2. Press firmly towards the rear to secure.

## REP 1.2 RH Cover

### Parts List on PL 1.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Open printer.
4. Open and secure scanner.

#### WARNING

**Do not bump the scanner after it is secured. The scan support assembly will release and cause the upper scan assembly to pinch you.**

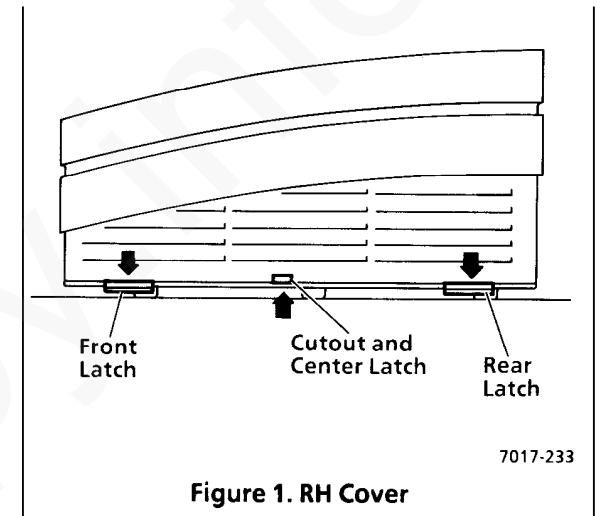
5. Remove RH cover.

**NOTE:** Use the cutout *in the RH cover* to access and release the center latch.

- a. Release the three latches (Figure 1) from the base plate.

**NOTE:** Machines with serial numbers (TBD) and above do not have the center latch.

- b. Remove the two screws securing the RH cover to the RH frame.
- c. Slide RH cover towards the right to clear the upper scan cover and the base plate, then pull it up and towards the rear to clear the A8 store & forward PWB, if installed.



#### Replacement

Reinstall in reverse order.

## REP 1.3 Coupler Cover

### Parts List on PL 1.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. **USO:** Remove coupler cover.
  - a. Disconnect handset cord from the left side of terminal.
  - b. Disconnect telephone line cord from the rear of terminal.
  - c. Remove the screw securing coupler cover.
  - d. Slide coupler cover towards the rear until it stops, then rotate bottom edge towards the left and down to remove.

#### Replacement

1. Align upper locking tab on coupler cover with the rear of cutout on LH cover.
2. Reinstall in reverse order.

## REP 1.4 LH Cover

### Parts List on PL 1.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Open printer.
5. Open and secure scanner.

#### **WARNING**

**Do not bump the scanner after it is secured. The scan support assembly will release and cause the upper scan assembly to pinch you.**

6. Remove LH cover.
  - a. Release two latches from the base plate.
  - b. Remove the two screws securing the LH cover to the LH frame.
  - c. Pull LH cover towards the left to clear the upper scan cover and the base plate, then pull it straight up to clear speaker assembly.

#### Replacement

Reinstall in reverse order.

## REP 1.5 Output Tray Assembly

### Parts List on PL 1.1

#### Removal

1. Remove document catch tray assembly (REP 1.1).
2. Remove output tray assembly.
  - a. Lift output tray assembly straight up until top front ridge touches base frame.
  - b. Rotate rear of output tray assembly forward, then slide output tray assembly backward to remove.

#### Replacement

1. Align front lip of output tray assembly with opening in rear of base frame.
2. Position output tray assembly parallel to input tray extension.
3. Insert front of output tray assembly fully into opening.
4. Rotate rear of output tray assembly forward while pressing down on front of output tray assembly until output tray assembly slips into a secured position.
5. Press output tray assembly down to ensure it is fully seated.
6. Reinstall document catch tray assembly (REP 1.1).

## REP 1.6 Rear Cover

### Parts List on PL 1.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove output tray assembly (REP 1.5).
4. Remove rear cover.
  - a. Remove the two screws securing rear cover to the power supply housing.
  - b. Rotate the top edge of rear cover towards the rear to clear printer output drive roller.
  - c. Lift rear cover up and out of cutouts in power supply housing.

#### Replacement

Reinstall in reverse order.

## REP 1.7 Upper Scan Cover

### Parts List on PL 1.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove scan support assembly.
6. Remove control panel assembly (REP 5.1).
7. Remove upper scan cover.
  - a. Remove the two screws securing upper scan cover.
  - b. Remove upper scan cover.

#### Replacement

1. Position the two locating pegs on upper scan cover into the two locating holes.
2. Ensure W4 wire harness is not pinched by the upper scan cover.
3. Reinstall in reverse order.

## REP 1.8 Lower Scan Cover

### Parts List on PL 1.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Open and secure scanner.

#### WARNING

**Do not bump the scanner after it is secured. The scan support assembly will release and cause the upper scan assembly to pinch you.**

4. Remove lower scan cover.
  - a. Release the latch securing lower scan cover to LH frame.
  - b. Release the latch securing lower scan cover to RH frame.
  - c. Pull lower scan cover gently forward to clear video assembly, then raise it to clear lip of base plate.

#### Replacement

Reinstall in reverse order.

## REP 1.9 Input Tray / Printer Cover Assembly

### Parts List on PL 1.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Open printer.
4. Remove input tray / printer cover assembly.
  - a. Loosen the two screws securing the input tray / printer cover assembly to the upper printer frame.
  - b. Lift rear of input tray / printer cover assembly to clear screws, then slide it towards the left and rear to clear printer release lever and the two cutouts on the upper printer frame.
5. If replacing input tray / printer cover assembly, remove input tray extension (REP 1.10).

#### Replacement

Reinstall in reverse order.

## REP 1.10 Input Tray Extension

### Parts List on PL 1.2

#### Removal

1. Remove document catch tray assembly (REP 1.1).
2. Remove input tray extension.
  - a. Rotate input tray extension to a vertical position.
  - b. Press bottom center of input tray extension until pivot pins release from locating holes.

#### Replacement

Reinstall in reverse order.

## REP 1.11 Paper Side Plates

### Parts List on PL 1.3

#### Removal

1. Remove document catch tray assembly (REP 1.1).
2. Open printer.
3. Remove paper side plates.
  - a. Remove recording paper.
  - b. Remove paper side plate/plates.

#### Replacement

1. Reinstall paper side plate in the LH locating slots of base frame so that the correct paper size is printed facing the RH frame.
2. Reinstall paper side plate in the RH locating slots of base frame so that the correct paper size is printed facing the LH frame.
3. Reinstall recording paper.
4. Close printer.
5. Reinstall document catch tray assembly (REP 1.1).



## REP 2.1 Retard Assembly

### Parts List on PL 2.1

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove retard assembly. (Figure 1)
  - a. Ensure nudger clutch is at home position (cutouts aligned).
  - b. Remove nudger arm spring from nudger arm.
  - c. Remove KL-ring securing LH bearing #6.
  - d. Remove LH bearing #6 from LH frame.
  - e. Remove retard assembly.
  - f. Remove RH bearing #6.

#### Replacement

1. Reinstall retard assembly
  - a. Ensure nudger clutch is at home position.
  - b. Reinstall RH bearing #6 on retard assembly.
  - c. Reinstall RH bearing #6 and retard assembly in RH frame.
  - d. Position paper weights in cutouts in nudger arm, then position nudger arm on top of the nudger roller.
  - e. Rotate retard assembly to align cutout on nudger timing gear with cutout on nudger clutch.

- f. Reinstall bearing # 6 in LH frame and secure with KL-ring.
  - g. Reinstall nudger arm spring in nudger arm.
2. Reinstall remaining components in reverse order.

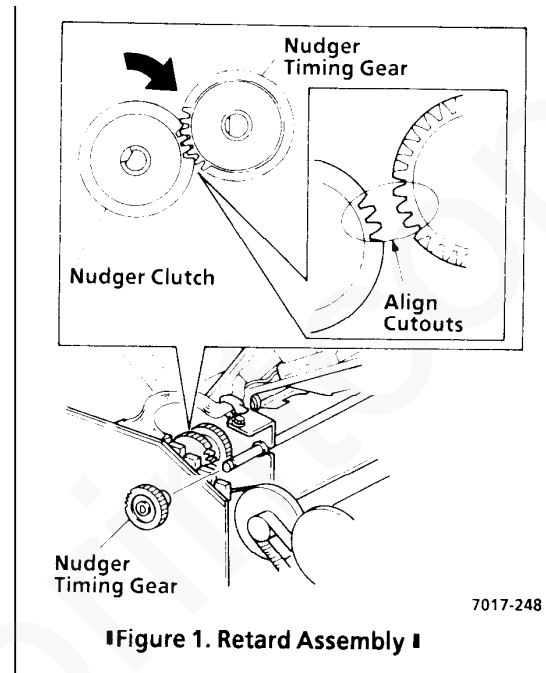


Figure 1. Retard Assembly

## REP 2.2 Nudger Timing Gear

### Parts List on PL 2.1

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove nudger timing gear.
  - a. Remove KL-ring securing nudger timing gear.
  - b. Remove nudger timing gear.

#### Replacement

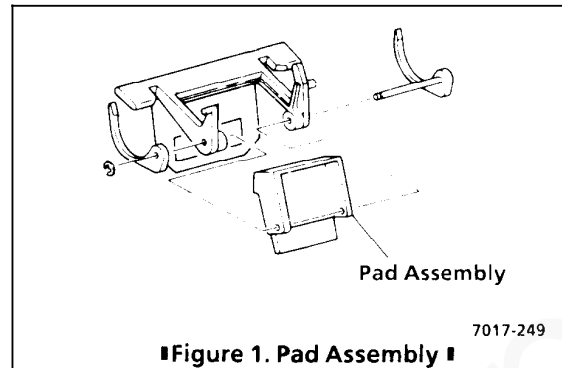
1. Reinstall nudger timing gear.
  - a. Rotate nudger timing gear to align cutout on gear with cutout on nudger clutch.
  - b. Reinstall nudger timing gear and secure with KL-ring.
2. Reinstall remaining components in reverse order.

## REP 2.3 Pad Assembly

### Parts List on PL 2.1

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove retard assembly (REP 2.1).
6. Remove pad assembly. (Figure 1)
  - a. Remove E-ring on right end of retard assembly.
  - b. Remove E-ring securing RH cam / stopper.
  - c. Remove RH cam / stopper.
  - d. Remove dowel pin.
  - e. Remove E-ring securing pad shaft.
  - f. Remove pad shaft, two paper weights, and nudger arm.
  - g. Remove E-ring securing pad assembly.
  - h. Remove pad assembly, LH and RH retard springs, and spring spacer.
  - i. Remove LH and RH hooks if installed.



#### Replacement

*NOTE: Check alignment of components carefully during reinstallation.*

Reinstall in reverse order.

## REP 2.12 ADF Belt (continued)

### Replacement

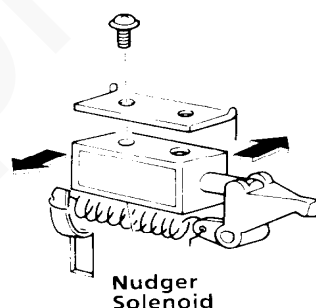
1. Reinstall ADF belt with dot (on edge of belt) towards the RH frame.
2. Reinstall remaining components in reverse order.
3. Ensure ADF belt is properly seated in the alignment grooves on both the ADF drive clutch and the ADF idler roller.

## REP 2.13 Nudger Solenoid Assembly

### Parts List on PL 2.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. If installed, remove A8 store & forward PWB (REP 5.4).
7. Remove A2 main PWB (REP 5.5).
8. Remove power supply assembly (REP 5.6).
9. Remove CNC PWB assembly (REP 5.10).
10. Remove nudger solenoid assembly. (Figure 1)
  - a. Remove screw on top of nudger solenoid, then remove solenoid.
  - b. Rotate nudger pawl towards the rear to remove nudger solenoid plunger.



7017-254

■Figure 1. Nudger Solenoid Assembly ■

### Replacement

1. If the nudger solenoid assembly was **replaced**, discard any spring and nylon washer with the old solenoid assembly.

*NOTE: Document feed problems can occur if the spring and nylon washer on the solenoid plunger are reinstalled when nudger solenoid assembly is **replaced**.*

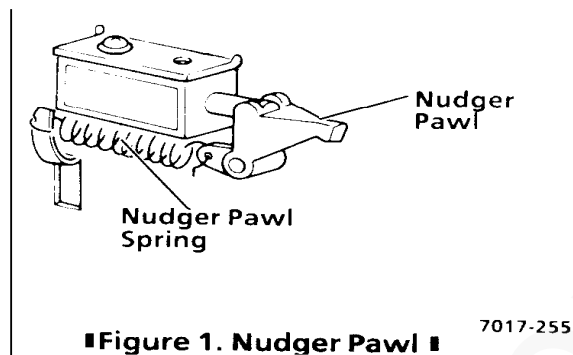
2. Reinstall nudger solenoid assembly.
  - a. Rotate nudger pawl towards the rear to reinstall nudger solenoid plunger.
  - b. If nudger solenoid assembly is being **reinstalled** and spring and nylon washer were removed during removal procedures, reposition spring and nylon washer on plunger.
  - c. Position nudger solenoid on the plunger, then on the locating pin.
  - d. Bias front of nudger solenoid assembly toward right and rear of nudger solenoid assembly toward left as shown in Figure 1.
  - e. Secure nudger solenoid assembly with the screw.
3. Reinstall remaining components in reverse order.

## REP 2.14 Nudger Pawl and Nudger Pawl Spring

### Parts List on PL 2.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. If installed, remove A8 store & forward PWB (REP 5.4).
7. Remove A2 main PWB (REP 5.5).
8. Remove power supply assembly (REP 5.6).
9. Remove CNC PWB assembly (REP 5.10).
10. Remove nudger solenoid assembly (REP 2.13).
11. Remove nudger pawl and nudger pawl spring. (Figure 1)
  - a. Rotate nudger pawl away from nudger clutch.
  - b. Remove nudger pawl spring from LH frame.
  - c. Remove nudger pawl and nudger pawl spring.



#### Replacement

1. Reinstall in reverse order.
2. Check that spring is positioned in the detent on the locating tab on the LH frame.

## REP 3.1 Scan Position Sensor

### Parts List on PL 3.1

#### Removal

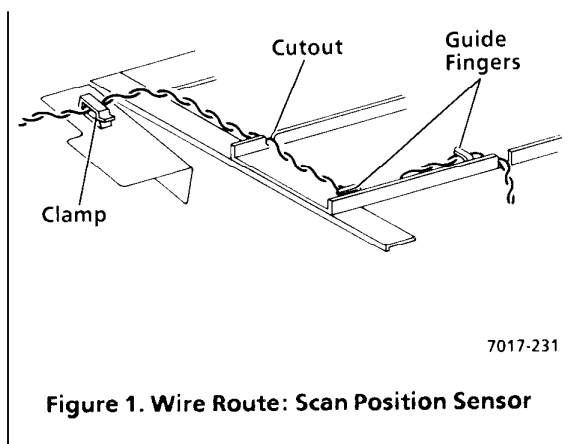
1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove control panel assembly (REP 5.1).
4. Remove upper scan cover (REP 1.7).
5. Remove scan position sensor.
  - a. Remove scan sensor bracket from scan input idler roller.
  - b. Remove scan position sensor from scan sensor bracket.
  - c. Disconnect J405 at scan position sensor.

**Continued**

## REP 3.1 Scan Position Sensor (continued)

### Replacement

1. Connect J405.
2. Reinstall scan position sensor on scan sensor bracket.
3. Position the sensor actuator in cutout on upper scan frame.
4. Reinstall scan sensor bracket.
5. Route wires around guide fingers and cutout on retard stop bracket and through cable clamp (Figure 1).
6. Reinstall remaining components in reverse order.



## REP 3.2 Scan Interlock Switch

### Parts List on PL 3.1

### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. If installed, remove A8 store & forward PWB (REP 5.4).
7. Remove A2 main PWB (REP 5.5).
8. Remove power supply assembly (REP 5.6).
9. Remove CNC PWB assembly (REP 5.10).
10. Remove scan interlock switch.
  - a. Remove scan interlock switch harness from cable clamp.
  - b. Remove screw securing scan interlock switch.
  - c. Remove scan interlock switch.

### Replacement

1. Reposition scan interlock switch on locating point and to the rear of the tab on the LH frame.
2. Reinstall screw securing scan interlock switch.

### CAUTION

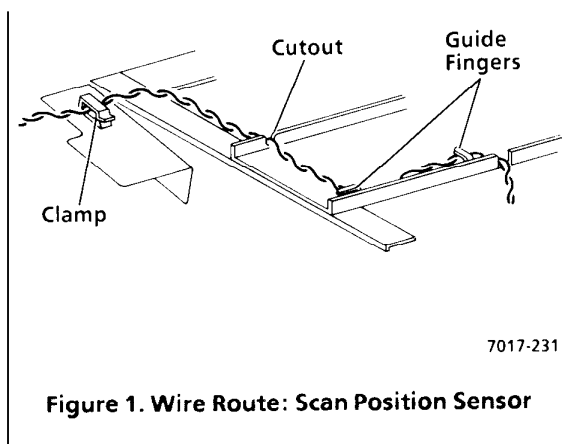
*Position scan interlock switch harness away from scan output drive belt.*

3. Reinstall scan interlock switch harness in cable clamp.
4. Reinstall remaining components in reverse order.

## REP 3.1 Scan Position Sensor (continued)

### Replacement

1. Connect J405.
2. Reinstall scan position sensor on scan sensor bracket.
3. Position the sensor actuator in cutout on upper scan frame.
4. Reinstall scan sensor bracket.
5. Route wires around guide fingers and cutout on retard stop bracket and through cable clamp (Figure 1).
6. Reinstall remaining components in reverse order.



## REP 3.2 Scan Interlock Switch

### Parts List on PL 3.1

### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. If installed, remove A8 store & forward PWB (REP 5.4).
7. Remove A2 main PWB (REP 5.5).
8. Remove power supply assembly (REP 5.6).
9. Remove CNC PWB assembly (REP 5.10).
10. Remove scan interlock switch.
  - a. Remove scan interlock switch harness from cable clamp.
  - b. Remove screw securing scan interlock switch.
  - c. Remove scan interlock switch.

### Replacement

1. Reposition scan interlock switch on locating point and to the rear of the tab on the LH frame.
2. Reinstall screw securing scan interlock switch.

### CAUTION

*Position scan interlock switch harness away from scan output drive belt.*

3. Reinstall scan interlock switch harness in cable clamp.
4. Reinstall remaining components in reverse order.

## REP 3.3 Scan Input Idler Roller

### Parts List on PL 3.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove control panel assembly (REP 5.1).
4. Remove upper scan cover (REP 1.7).
5. Remove scan input idler roller.
  - a. Remove scan sensor bracket from scan input idler roller.
  - b. Remove E-ring securing platen pulley on scan input idler roller shaft.
  - c. Remove platen pulley and platen belt.
  - d. Remove two scan idler springs from scan input idler roller.
  - e. Remove two upper scan bearings from scan input idler roller.
  - f. Remove scan input idler roller.

#### Replacement

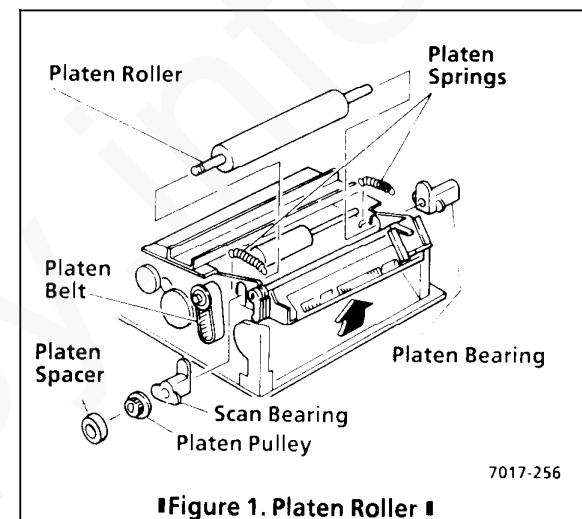
Reinstall in reverse order.

## REP 3.4 Platen Roller

### Parts List on PL 3.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove control panel assembly (REP 5.1).
4. Remove upper scan cover (REP 1.7).
5. Remove platen roller. (Figure 1)
  - a. Remove E-ring securing platen spacer.
  - b. Remove platen spacer.
  - c. Remove platen belt.
  - d. Remove platen pulley from platen roller.
  - e. Remove the two platen springs.
  - f. Remove upper scan bearing from platen roller.
  - g. Remove RH platen bearing.
  - h. Remove platen roller.



#### Replacement

Reinstall in reverse order.



## REP 3.5 Scan Output Idler Roller

### Parts List on PL 3.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove control panel assembly (REP 5.1).
4. Remove upper scan cover (REP 1.7).
5. Remove scan output idler roller.
  - a. Remove two scan idler springs from scan output idler roller.
  - b. Remove two upper scan bearings from scan output idler roller.
  - c. Remove scan output idler roller.

#### Replacement

Reinstall in reverse order.

## REP 3.6 Upper Scan Assembly

### Parts List on PL 3.2

#### Removal

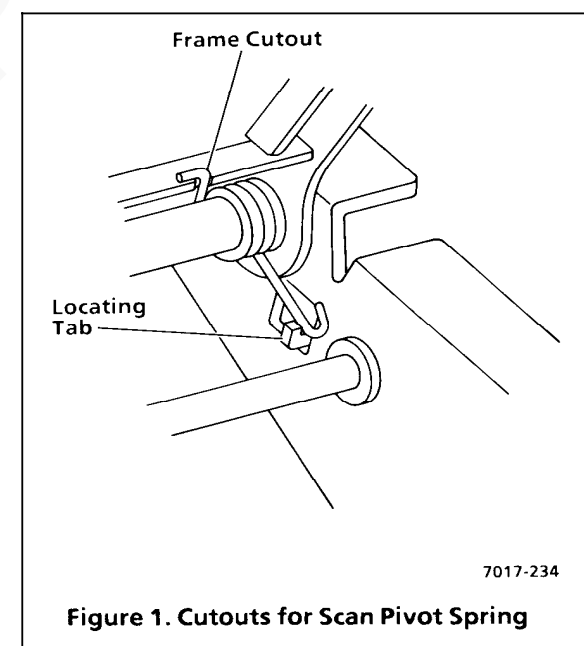
1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper scan assembly.
  - a. Remove screw securing ground wire to LH frame.
  - b. Disconnect J110 and J111 at A0 CNC PWB.
  - c. Remove wire harnesses from cable clamp.
  - d. Release nudger arm spring from the scan pivot shaft.
  - e. Remove LH E-ring from scan pivot shaft.
  - f. Remove LH scan pivot bearing.
  - g. Remove scan pivot springs while removing the scan pivot shaft.
  - h. Remove upper scan assembly.

## Replacement

*NOTE: During reinstallation, ensure proper alignment by:*

- *Rotating upper scan assembly towards the rear of terminal.*
- *Ensuring both scan pivot springs are properly positioned in the cutouts in the upper scan frame and on top of the locating tabs on the LH and RH frame (Figure 1). The spring coils can bind between the upper scan frame and the scan pivot shaft.*

Reinstall in reverse order.



## REP 3.7 Video Assembly

### Parts List on PL 3.3

#### Removal

##### CAUTION

*Follow electrostatic discharge precautions (Section 6). Static electricity can damage this component.*

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove video assembly. (Figure 1)
  - a. Remove screw securing video assembly and scan belt bracket to LH frame.
  - b. Remove screw securing video assembly to RH frame.
  - c. Lift video assembly to access W11 wire harness.
  - d. Disconnect J201 from video assembly.
  - e. Remove video assembly.

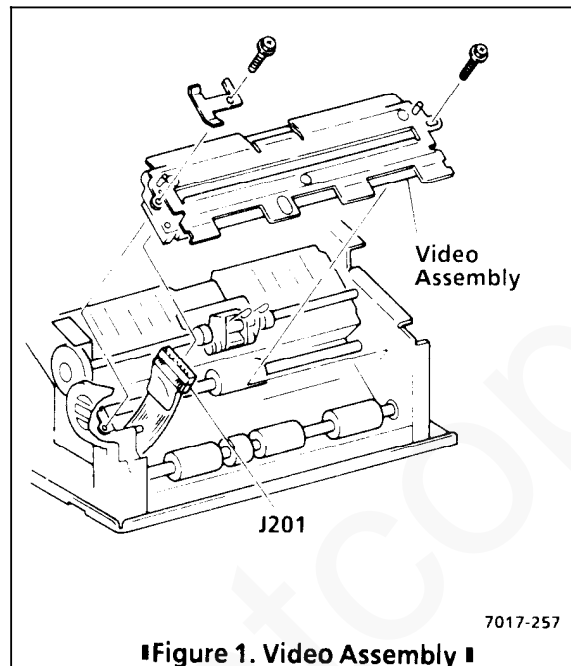


Figure 1. Video Assembly

#### Replacement

Reinstall in reverse order.

## REP 3.8 Scan Pulley/Gear

### Parts List on PL 3.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove scan pulley/gear. (Figure 1)
  - a. Remove scan output drive belt.
  - b. Remove E-ring from scan input drive roller.
  - c. Remove scan input drive belt.
  - d. Remove scan pulley/gear.

#### Replacement

Reinstall in reverse order.

## REP 3.9 Scan Input Drive Roller

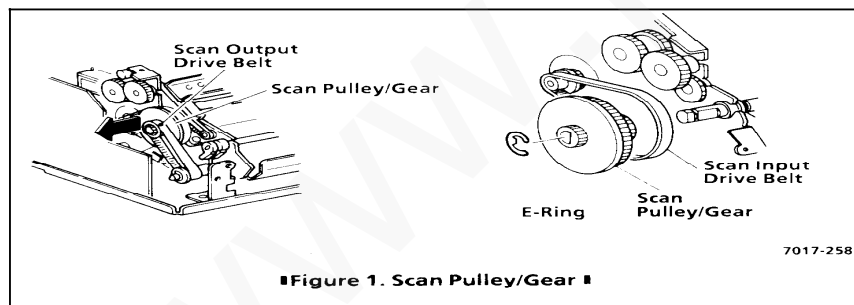
### Parts List on PL 3.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove video assembly (REP 3.7).
7. Remove scan pulley/gear (REP 3.8).
8. Remove scan input drive roller.
  - a. Remove E-ring and plastic bearing from LH frame.
  - b. Remove E-ring and brass bearing from RH frame.
  - c. Remove scan input drive roller.
  - d. Remove bearings.

#### Replacement

Reinstall in reverse order.



## REP 3.10 Scan Output Drive Roller

### Parts List on PL 3.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove video assembly (REP 3.7).
7. Remove scan output drive roller.
  - a. Remove scan output drive belt.
  - b. Remove the three E-rings on the scan output drive roller.
  - c. Remove scan output drive roller and brass bearing from RH frame.
  - d. Remove scan output drive pulley from scan output drive roller.
  - e. Remove scan output drive roller and plastic bearing from LH frame.
  - f. Remove bearings from scan output drive roller.

#### Replacement

Reinstall in reverse order.

## REP 3.11 Scan Output Drive Pulley

### Parts List on PL 3.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove speaker assembly (REP 5.2).
6. Remove scan output drive pulley.
  - a. Remove scan output drive belt.
  - b. Remove E-ring securing scan output drive pulley.
  - c. Remove scan output drive pulley.

#### Replacement

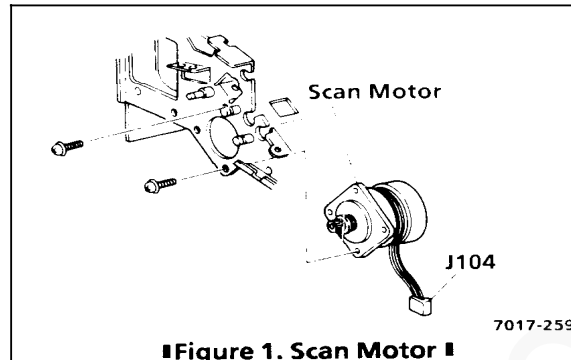
Reinstall in reverse order.

## REP 3.12 Scan Motor

### Parts List on PL 3.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. If installed, remove A8 store and forward PWB.
7. Remove A2 main PWB (REP 5.5).
8. Remove power supply assembly (REP 5.6).
9. Remove CNC PWB assembly (REP 5.10).
10. Remove scan motor. (Figure 1)
  - a. Remove scan input drive belt from scan motor.
  - b. Remove the two screws from the scan motor.
  - c. Remove scan motor through the RH frame.



#### Replacement

**NOTE:** Replacement motors have both J104 and J115 marked on the connector. Scan motor connector should be marked as J104.

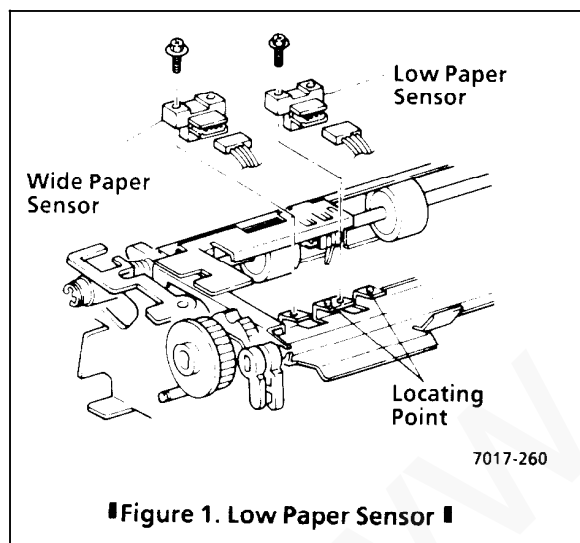
1. If scan motor was replaced, delete J115 on the connector.
2. Reinstall in reverse order.

## REP 4.1 Low Paper Sensor and RX: Wide Paper Sensor

### Parts List on PL 4.1

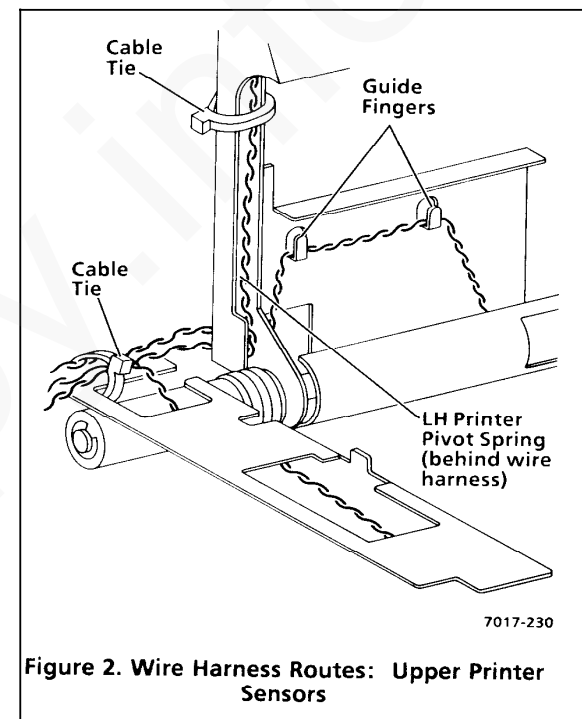
#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove input tray / printer cover assembly (REP 1.9).
4. Remove sensor. (Figure 1)
  - a. Disconnect jack from sensor:  
J408 low paper sensor  
J409 RX: wide paper sensor
  - b. Remove screw securing sensor.
  - c. Remove sensor.



#### Replacement

1. Reposition sensor on locating point.
2. Reinstall screw securing sensor.
3. Connect jack:  
J408 low paper sensor  
J409 RX: wide paper sensor
4. Ensure wire harnesses are properly routed through guide fingers. (Figure 2)
5. Reinstall remaining components in reverse order.

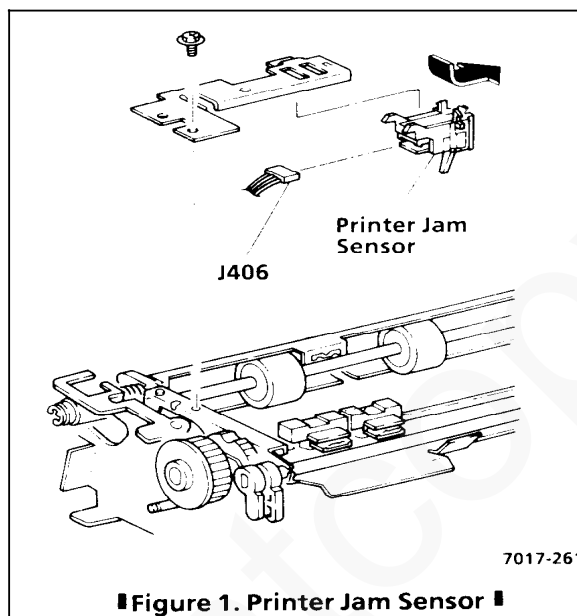


## REP 4.2 Printer Jam Sensor

### Parts List on PL 4.1

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove input tray / printer cover assembly (REP 1.9).
4. Remove jam sensor bracket.
  - a. Remove screw securing jam sensor bracket.
  - b. Remove jam sensor bracket.
5. Remove printer jam sensor. (Figure 1)
  - a. Disconnect J406 at printer jam sensor.
  - b. Release locking tabs, then remove printer jam sensor.



#### Replacement

1. Reinstall sensor on jam sensor bracket.
2. Connect J406.
3. Ensure W6 wire harness is properly routed through guide fingers. (Figure 1 of REP 4.1)
4. Reposition jam sensor bracket in locating slot on upper printer frame and on locating point, then secure with screw.
5. Reinstall remaining components in reverse order.

## REP 4.3 Printer Interlock Switch

### Parts List on PL 4.1

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove printer interlock switch.
  - a. Disconnect J112 at A0 CNC PWB.
  - b. Remove printer interlock switch harness from twist tie.
  - c. Remove screw securing printer interlock switch.
  - d. Remove printer interlock switch.

#### Replacement

1. Reposition printer interlock switch on the locating point and to rear of the tab on the LH frame.
2. Reinstall screw securing printer interlock switch.
3. Reinstall remaining components in reverse order.

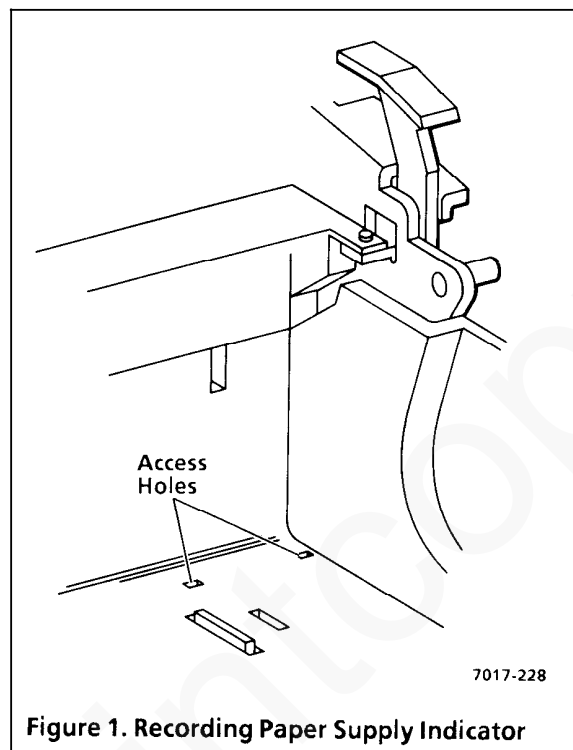


## REP 4.4 Recording Paper Supply Indicator

### Parts List on PL 4.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. If installed, remove A8 store & forward PWB (REP 5.4).
5. Remove the recording paper.
6. Remove the recording paper supply indicator.
  - a. Remove indicator spring from the RH frame.
  - b. Press a small screwdriver through the access holes in the base frame (Figure 1) to release the recording paper supply indicator.



#### Replacement

1. Reinstall the recording paper supply indicator.
2. Reinstall the indicator spring.
3. Check for the following:
  - The recording paper supply indicator is positioned at rear of RH frame cutout.
  - Both ends of shaft on the recording paper supply indicator are secured in the base frame.
  - Indicator spring is positioned in detent on the locating tab on the RH frame.
4. Reinstall remaining components in reverse order.

## REP 4.5 Lower Paper Guide Assembly

### Parts List on PL 4.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Open printer.
4. Remove recording paper.
5. Remove lower paper guide assembly.
  - a. Remove the screw securing left side of lower paper guide assembly.

*NOTE: Set this screw (from left side of lower paper guide assembly) aside, it is longer than the other black screws.*

- b. Remove the screw securing right side of lower paper guide assembly.
  - c. Remove lower paper guide assembly.

#### Replacement

1. Position three locating tabs in cutouts in base frame.
2. Reinstall remaining components in reverse order.

## REP 4.6 Printer Motor Cover

### Parts List on PL 4.3

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Open printer.
4. Remove recording paper.
5. Remove lower paper guide assembly (REP 4.5).
6. Remove printer motor cover.
  - a. Remove printer motor cover from LH frame.
  - b. Remove printer motor cover.

#### Replacement

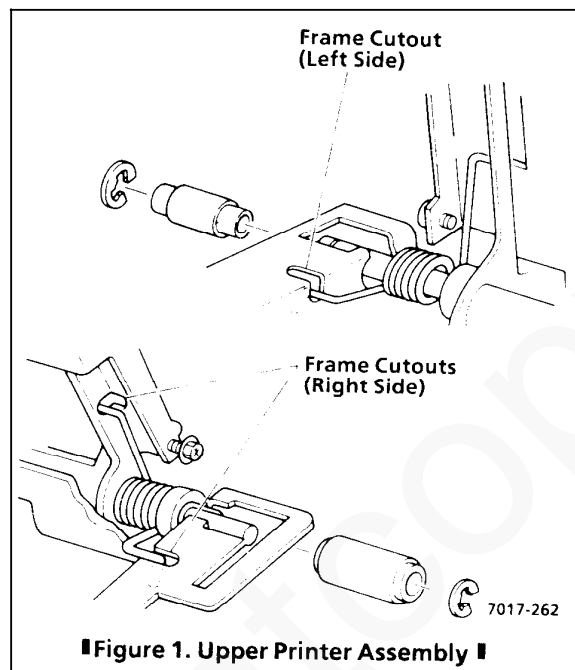
1. Position two locating tabs in cutouts in base frame.
2. Position locating pin in LH frame.
3. Reinstall remaining components in reverse order.

## REP 4.7 Upper Printer Assembly

### Parts List on PL 4.1

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper printer assembly. (Figure 1)
  - a. Cut cable tie.
  - b. Disconnect J114, J116, and RX: J117 from A0 CNC PWB.
  - c. Remove W6, W7, and RX: W8 wire harnesses from cable clamp.
  - d. Remove E-rings at both ends of printer pivot shaft.
  - e. Remove LH and RH printer pivot bearings.
  - f. Remove printer pivot shaft from RH frame.
  - g. Remove printer pivot shaft from LH frame.
  - h. Remove upper printer assembly.



#### Replacement

*NOTE: Terminals without Tag/MOD 3 have brass and black washers which must be reinstalled:*

- a brass washer between the LH frame and the LH printer pivot spring,
  - a brass washer between the RH frame and the RH printer cam bearing, and
  - a black washer between the LH spring and the LH bearing.
1. Position printer pivot shaft in LH frame.
  2. Position printer pivot shaft in RH frame.

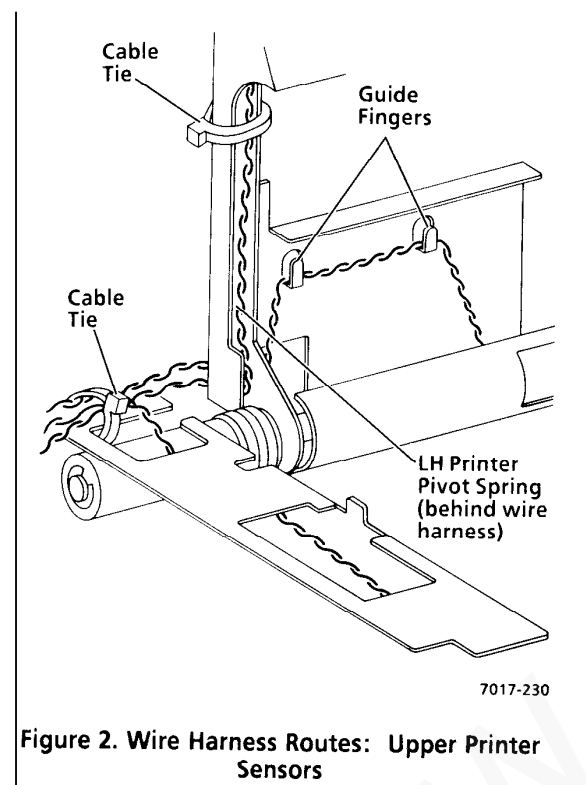
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## REP 4.7 Upper Printer Assembly (continued)

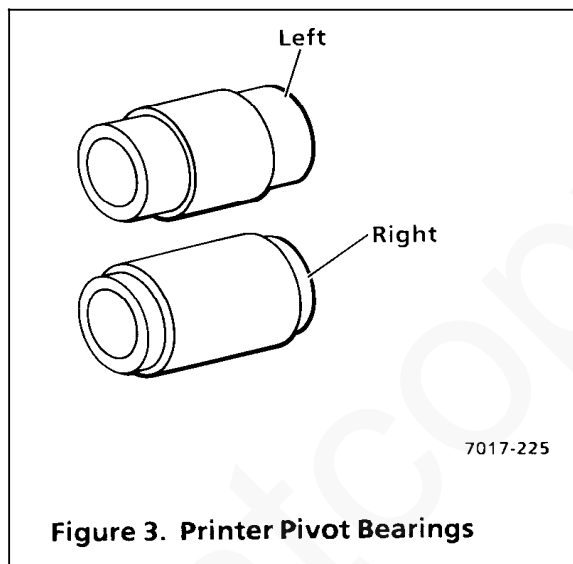
### CAUTION

Route LH printer pivot spring behind the wire harness.

3. Ensure LH printer pivot spring (black) is properly seated in both frame cutouts and wire harnesses are properly routed. (Figure 2)



4. Ensure RH printer pivot spring (brass) is properly seated in both frame cutouts.
5. Reinstall and/or replace remaining components in reverse order. (Figure 3)



## REP 4.8 Printer Output Idler Rollers

### Parts List on PL 4.1

### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper printer assembly (REP 4.7).
7. Remove printer output idler rollers.
  - a. Remove all E-rings securing printer output idler rollers.
  - b. Remove E-ring securing LH printer cam bearing.
  - c. Remove LH printer cam bearing and LH printer pivot spring.
  - d. Slide printer pivot shaft to the right to remove printer output idler rollers.

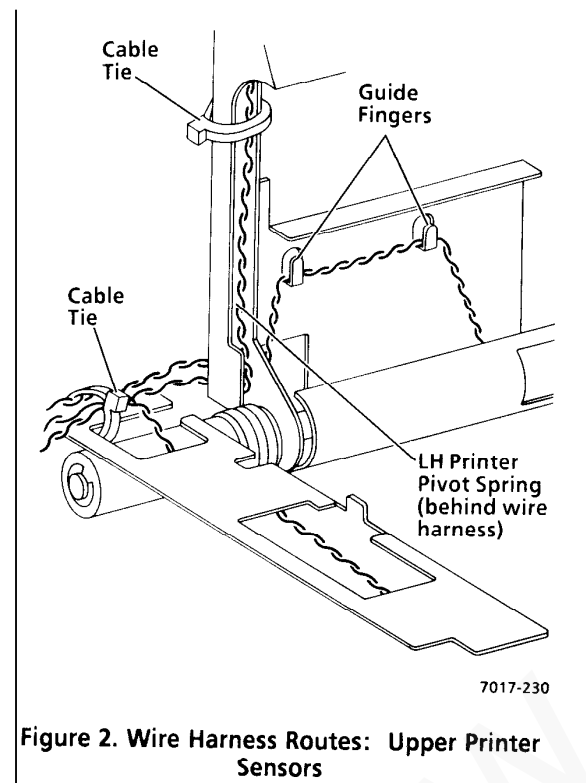
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## REP 4.7 Upper Printer Assembly (continued)

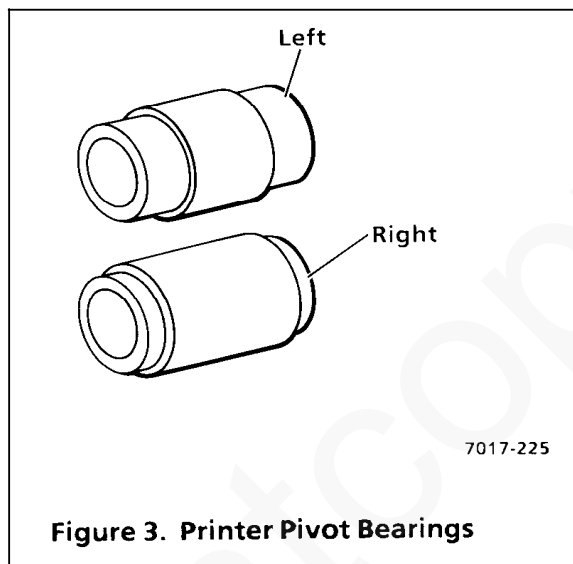
### CAUTION

Route LH printer pivot spring behind the wire harness.

3. Ensure LH printer pivot spring (black) is properly seated in both frame cutouts and wire harnesses are properly routed. (Figure 2)



4. Ensure RH printer pivot spring (brass) is properly seated in both frame cutouts.
5. Reinstall and/or replace remaining components in reverse order. (Figure 3)



## REP 4.8 Printer Output Idler Rollers

### Parts List on PL 4.1

### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper printer assembly (REP 4.7).
7. Remove printer output idler rollers.
  - a. Remove all E-rings securing printer output idler rollers.
  - b. Remove E-ring securing LH printer cam bearing.
  - c. Remove LH printer cam bearing and LH printer pivot spring.
  - d. Slide printer pivot shaft to the right to remove printer output idler rollers.

*Continued*

## REP 4.8 Printer Output Idler Rollers (continued)

### Replacement

1. Reinstall printer output idler rollers.

**NOTE:** Reinstall the idler rollers with the spokes on the left side and the smooth hub on the right side.

- a. Slide printer pivot shaft to the left to reposition and hold printer output idler rollers in upper printer frame.
  - b. Reposition printer pivot shaft through upper printer frame.
  - c. Reinstall LH printer cam bearing and secure with E-ring.
  - d. Reinstall all E-rings securing printer output idler rollers.
  - e. Reposition LH printer pivot spring on printer cam bearing.
2. Reinstall remaining components in reverse order.

## REP 4.9 Cutter

### Parts List on PL 4.2

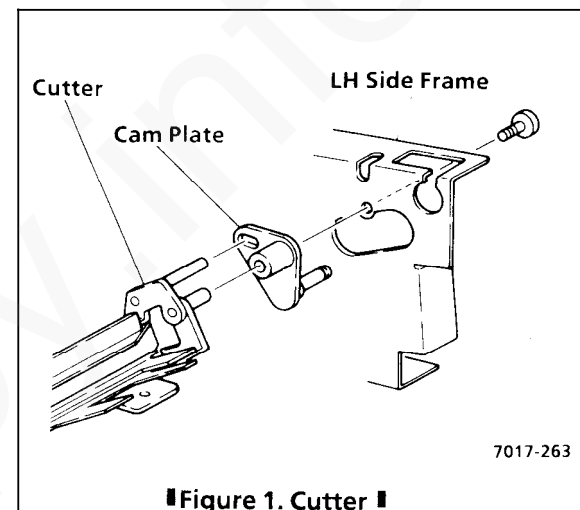
### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper printer assembly (REP 4.7).
7. Remove the cutter. (Figure 1)
  - a. Remove screw securing the cutter cam.
  - b. Remove the two screws securing the cutter.

### WARNING

**Do not handle the pivoting blade on the cutter. It has a sharp edge.**

- c. Remove the cutter.



### Replacement

### WARNING

**Do not handle the pivoting blade on the cutter. It has a sharp edge.**

1. Reposition cutter.
2. Bias cutter to rear and secure with screws.
3. Reinstall remaining components in reverse order.



## REP 4.8 Printer Output Idler Rollers (continued)

### Replacement

1. Reinstall printer output idler rollers.

*NOTE: Reinstall the idler rollers with the spokes on the left side and the smooth hub on the right side.*

- a. Slide printer pivot shaft to the left to reposition and hold printer output idler rollers in upper printer frame.
  - b. Reposition printer pivot shaft through upper printer frame.
  - c. Reinstall LH printer cam bearing and secure with E-ring.
  - d. Reinstall all E-rings securing printer output idler rollers.
  - e. Reposition LH printer pivot spring on printer cam bearing.
2. Reinstall remaining components in reverse order.

## REP 4.9 Cutter

### Parts List on PL 4.2

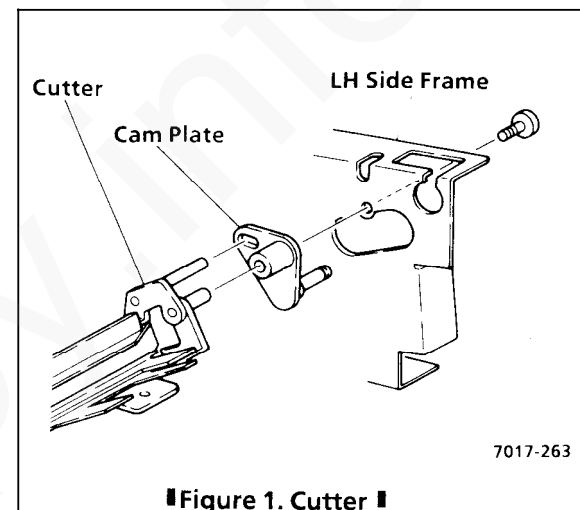
### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper printer assembly (REP 4.7).
7. Remove the cutter. (Figure 1)
  - a. Remove screw securing the cutter cam.
  - b. Remove the two screws securing the cutter.

### WARNING

**Do not handle the pivoting blade on the cutter. It has a sharp edge.**

- c. Remove the cutter.



### Replacement

### WARNING

**Do not handle the pivoting blade on the cutter. It has a sharp edge.**

1. Reposition cutter.
2. Bias cutter to rear and secure with screws.
3. Reinstall remaining components in reverse order.

## REP 4.10 Printer Output Drive Roller

### Parts List on PL 4.3

#### Removal

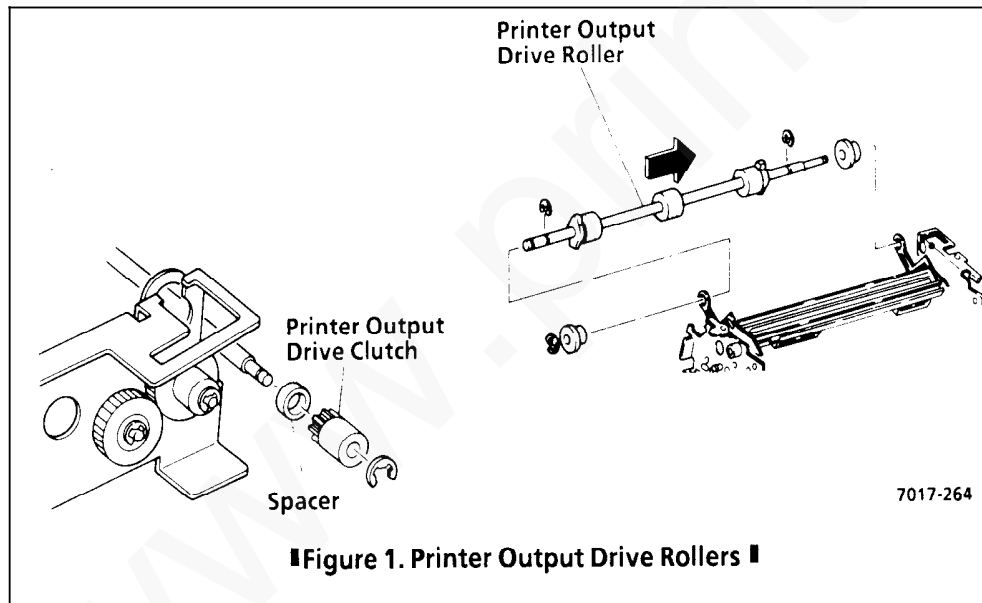
1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper printer assembly (REP 4.7).
7. Remove printer output drive roller. (Figure 1)

- a. Remove E-ring securing printer output drive clutch.
- b. If nylon washer is installed next to E-ring, remove nylon washer.
- c. Remove printer output drive clutch and output drive spacer.
- d. Remove the two E-rings securing RH and LH printer output drive bearings.
- e. Remove printer output drive roller.

#### Replacement

*NOTE: Some terminals have a nylon washer installed between the E-ring and the right side of the printer output drive clutch. Be sure to reinstall it, if it was previously installed.*

Reinstall in reverse order.

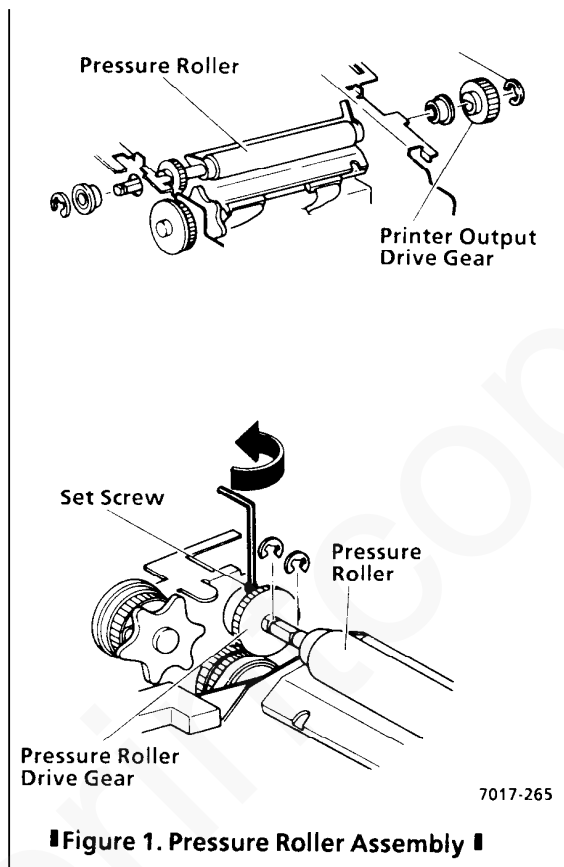


## REP 4.11 Pressure Roller Assembly

### Parts List on PL 4.2

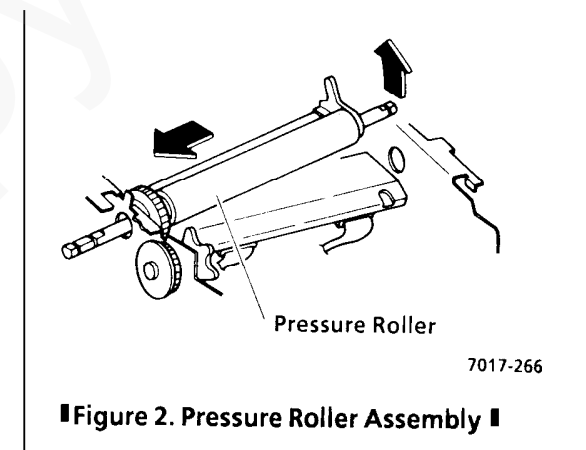
#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove recording paper.
7. Remove lower paper guide assembly (REP 4.5).
8. Remove printer motor cover (REP 4.6).
9. Remove pressure roller assembly. (Figure 1)
  - a. Remove all E-rings on the pressure roller assembly.
  - b. Remove printer output drive gear.
  - c. Remove RH and LH pressure roller bearings.
  - d. Loosen setscrew in pressure roller drive gear.
  - e. Slide pressure roller assembly fully left to position pressure roller drive gear against LH frame.
  - f. Remove pressure roller assembly.



#### Replacement

1. Replace individual components as needed.
2. Reinstall pressure roller assembly.
3. Position pressure roller drive gear directly over planet gear #3 (white) and secure with setscrew.
4. Reinstall remaining components in reverse order. (Figure 2)



## REP 4.12 Thermal Head Assembly

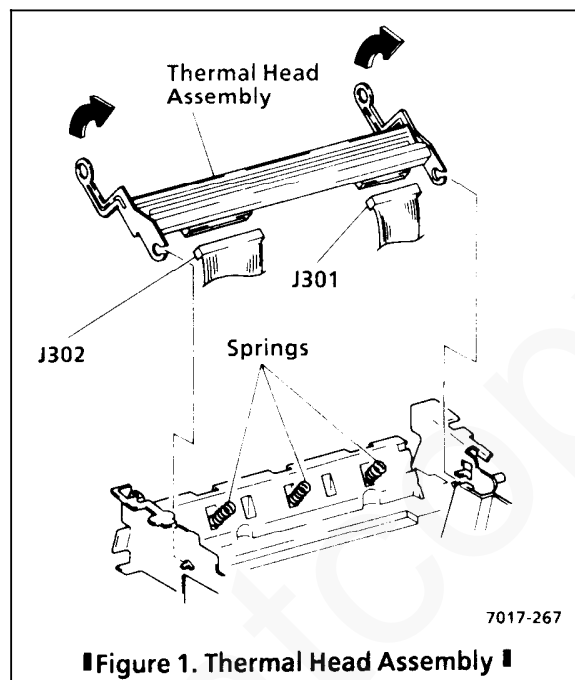
### Parts List on PL 4.3

#### Removal

##### CAUTION

Follow electrostatic discharge precautions (Section 6). Static electricity can damage this component.

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove recording paper.
7. Remove lower paper guide assembly (REP 4.5).
8. Remove printer motor cover (REP 4.6).
9. Remove upper printer assembly (REP 4.7).
10. Remove cutter (REP 4.9).
11. Remove printer output drive roller (REP 4.10).
12. Remove pressure roller assembly (REP 4.11).
13. Remove thermal head assembly. (Figure 1)
  - a. Remove the two printer output drive bearings.
  - b. Rotate thermal head assembly forward and slide off studs on RH and LH frames.
  - c. Disconnect J301 and J302 at thermal head assembly.



#### Replacement

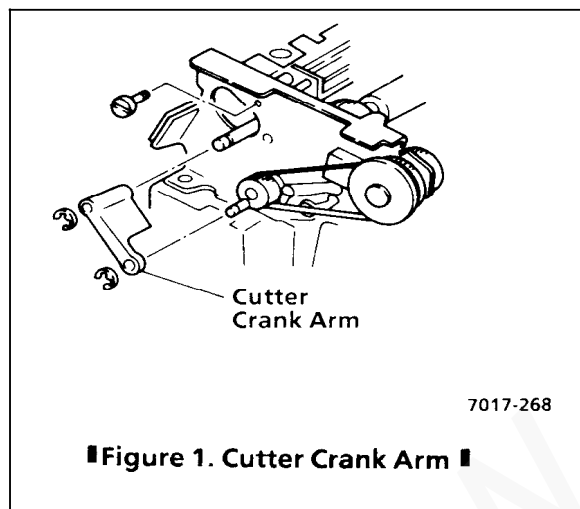
1. Ensure the three thermal head springs are properly seated in the positioning holes in the base frame and on the locating points on the underside of the thermal head assembly.
2. Reinstall in reverse order.

## REP 4.13 Cutter Crank Arm

### Parts List on PL 4.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove the cutter crank arm. (Figure 1)
  - a. Remove the two E-rings securing the cutter crank arm.
  - b. RX: Remove spring.
  - c. Remove the cutter crank arm.



#### Replacement

1. Reinstall the cutter crank arm.
  - a. Rotate the cutter thumbwheel until the stud on the cutter crank pulley aligns with the cutter crank arm.
  - b. Reinstall the cutter crank arm and secure with the E-rings.
2. Reinstall remaining components in reverse order.

## REP 4.14 Cutter Cam

### Parts List on PL 4.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove upper printer assembly (REP 4.7).
7. Remove cutter (REP 4.9).
8. Remove cutter crank arm (REP 4.13).
9. Remove cutter cam.
  - a. Depress cutter solenoid plunger.
  - b. Remove cutter cam.

#### Replacement

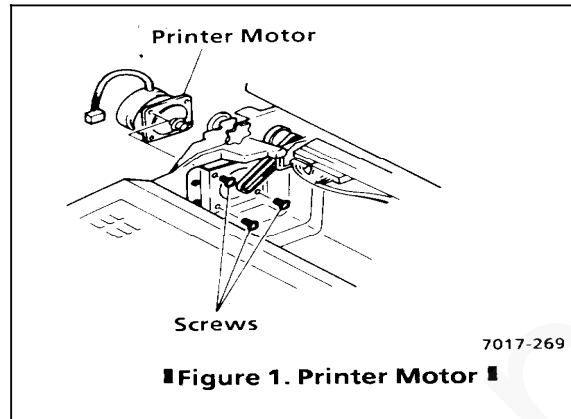
Reinstall in reverse order.

## REP 4.15 Printer Motor

### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove LH paper side plate (REP 1.11).
7. Remove recording paper.
8. Remove lower paper guide assembly (REP 4.5).
9. Remove printer motor cover (REP 4.6).
10. If installed, remove A8 store & forward PWB (REP 5.4).
11. Remove A2 main PWB (REP 5.5).
12. Remove power supply assembly (REP 5.6).
13. Remove CNC PWB assembly (REP 5.10).
14. Remove printer motor. (Figure 1)
  - a. Remove the three screws securing the printer motor.
  - b. Loosen printer belt at printer motor.
  - c. Remove printer motor harness from twist tie.
  - d. Remove printer motor.



#### Replacement

*NOTE: Replacement motors have both J104 and J115 marked on the connector. Printer motor connector should be marked as J115.*

1. If printer motor was replaced, delete J104 on the connector.
2. Reinstall in reverse order.

## REP 4.16 Cutter Belt

### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove cutter crank arm (REP 4.13).
6. Remove cutter belt.

#### Replacement

Reinstall in reverse order.

## REP 4.17 Cutter Switch

### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove cutter switch.
  - a. Disconnect J113 at A0 CNC PWB.
  - b. Cut cable tie securing cutter switch harness.
  - c. Remove cutter switch harness from cable clamp.
  - d. Manually rotate the cutter thumbwheel until cutter switch deactuates.
  - e. Remove screw securing cutter switch.
  - f. Remove cutter switch.

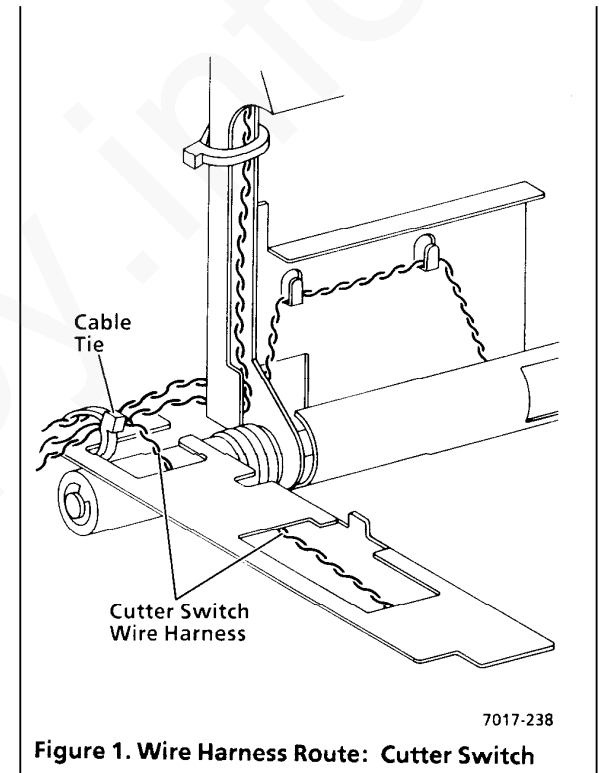
#### Replacement

1. Reposition cutter switch on locating point.
2. Reinstall screw securing cutter switch.

#### CAUTION

*Position wires away from cutter belt.*

3. Secure cutter switch harness in cable clamp.
4. Replace cable tie. (Figure 1)
5. Reinstall remaining components in reverse order.



**Figure 1. Wire Harness Route: Cutter Switch**

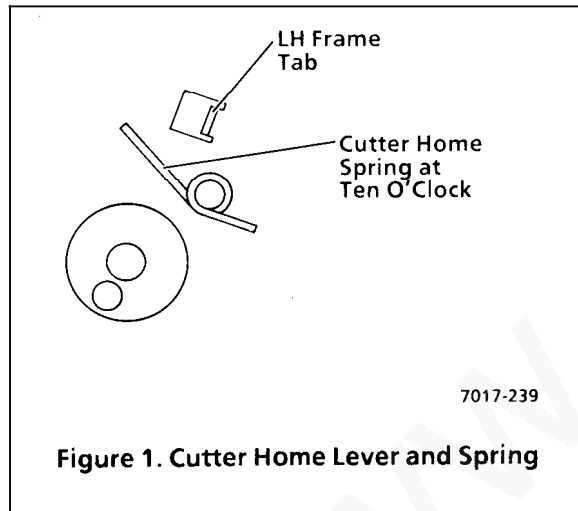


## REP 4.18 Cutter Home Lever and/or Cutter Home Spring

### Parts List on PL 4.4

#### Removal

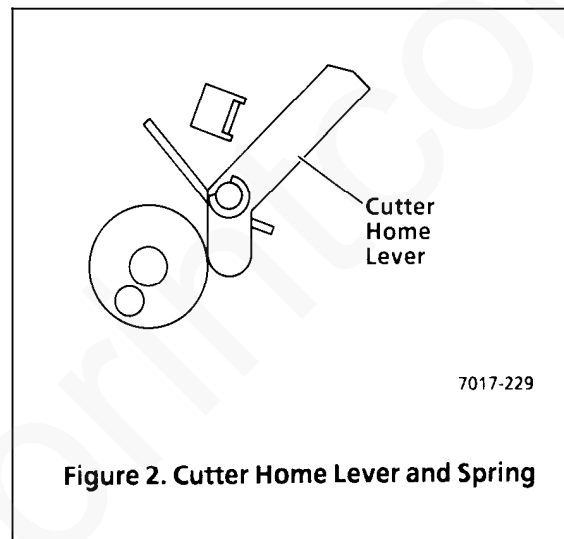
1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove the cutter crank arm (REP 4.13).
6. Remove the cutter belt.
7. Remove the cutter switch (REP 4.17).
8. Remove the cutter home lever and cutter home spring.
  - a. Release the cutter home spring from the LH frame tab. (Figure 1)



- b. Remove the E-ring securing the cutter home lever.
- c. Remove the cutter home lever.
- d. Remove the cutter home spring.

#### Replacement

1. Reinstall the cutter home lever and cutter home spring.
  - a. Position the cutter home spring with the long arm at ten o'clock. (Figure 1)
  - b. Reinstall the cutter home lever and secure with the E-ring. (Figure 2)



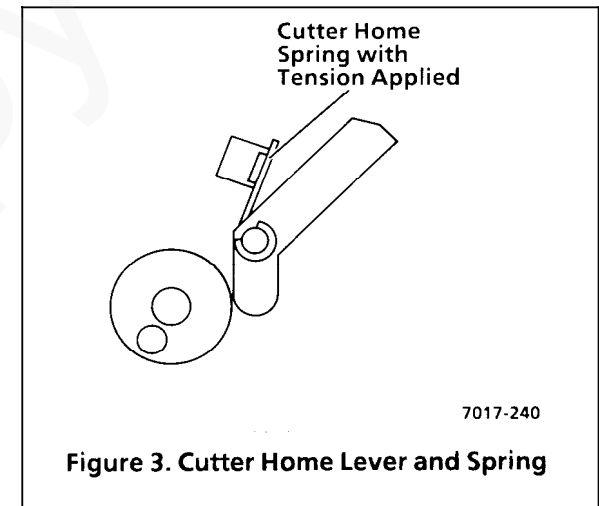
- c. Reposition the long arm of the cutter home spring to the front of the locating tab on the LH frame. (Figure 3)

2. Reinstall remaining components in reverse order.

#### CAUTION

*Position wires away from cutter belt.*

3. If necessary, reposition wires.



## REP 4.19 Planetary Assembly

### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove recording paper.
7. Remove lower paper guide assembly (REP 4.5).
8. Remove printer motor cover (REP 4.6).
9. Remove pressure roller assembly (REP 4.11).

10. Remove cutter crank arm (REP 4.13).
11. Remove cutter belt.
12. Remove planetary assembly.
  - a. Remove the two screws and spacer securing planet bracket.
  - b. Remove planet bracket.
  - c. Loosen printer belt at printer motor.
  - d. Remove planet gears and planet pulley.

#### Replacement

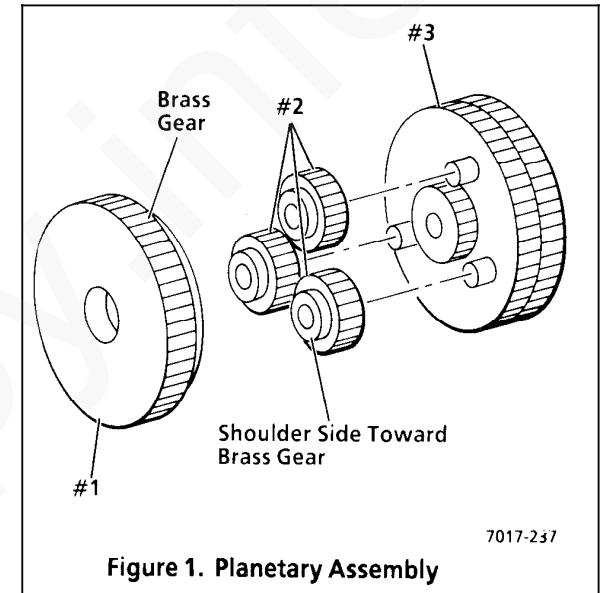
##### CAUTION

*The three planet gear #2 are easily dislodged. Ensure that the three planet gear #2 are properly seated before reinstalling.*

1. Apply a very small amount of 70P87 to the internal teeth and internal contacting surfaces of the planetary assembly. (Figure 1)

**NOTE:** *Ensure 70P87 is not on external surfaces of the planetary assembly.*

2. Ensure shoulders of the three planet gear #2 are positioned towards the brass gear (planet gear #1).
3. Reinstall in reverse order.

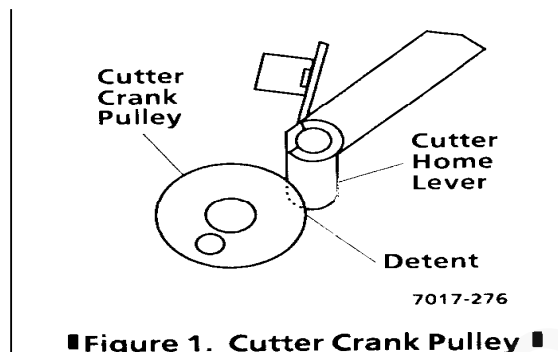


## REP 4.20 Cutter Crank Pulley

### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove recording paper.
7. Remove lower paper guide assembly (REP 4.5).
8. Remove printer motor cover (REP 4.6).
9. Remove upper printer assembly (REP 4.7).
10. Remove cutter (REP 4.9).
11. Remove printer output drive roller (REP 4.10).
12. Remove pressure roller assembly (REP 4.11).
13. Remove thermal head assembly (REP 4.12).
14. Remove cutter crank arm (REP 4.13).
15. Remove cutter belt.
16. Remove cutter crank pulley. (Figure 1)
  - a. Remove E-ring securing the cutter crank pulley.
  - b. Remove the cutter crank pulley.
  - c. Remove both cutter crank bearings.



■ Figure 1. Cutter Crank Pulley ■

#### Replacement

1. Reinstall cutter crank pulley.
  - a. Position one of the cutter crank bearings on the cutter crank pulley.
  - b. Reposition cutter home lever and hold until cutter crank pulley is repositioned.
  - c. Reinstall both bearings and cutter crank pulley with detent positioned at cutter home lever.
  - d. Reinstall E-ring to secure cutter crank pulley.
2. Reinstall remaining components in reverse order.

## REP 4.21 Cutter Clutch

### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove recording paper.
7. Remove lower paper guide assembly (REP 4.5).
8. Remove printer motor cover (REP 4.6).
9. Remove upper printer assembly (REP 4.7).
10. Remove cutter (REP 4.9).

**Continued**

## REP 4.21 Cutter Clutch (continued)

11. Remove printer output drive roller (REP 4.10).
12. Remove pressure roller assembly (REP 4.11).
13. Remove thermal head assembly (REP 4.12).
14. Remove cutter crank arm (REP 4.13).
15. Remove cutter belt.
16. Remove planetary assembly (REP 4.19).
17. Remove cutter crank pulley (REP 4.20).
18. Remove cutter clutch.
  - a. Manually actuate cutter solenoid.
  - b. Remove the cutter clutch.

### Replacement

Reinstall in reverse order.

## REP 4.22 Cutter Solenoid Assembly

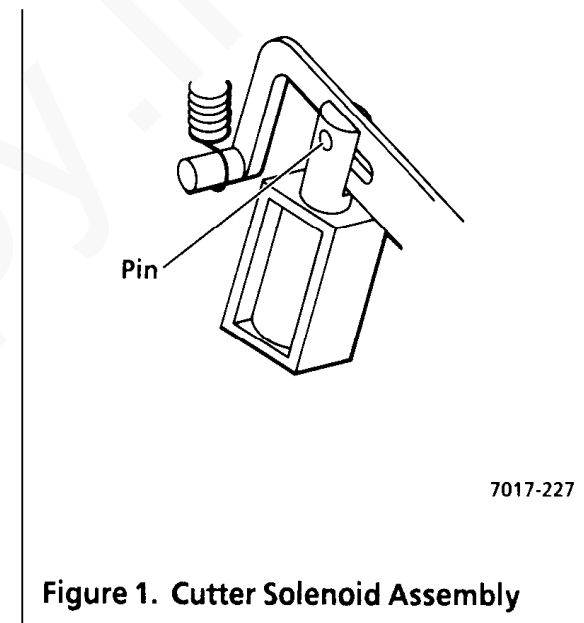
### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove output tray assembly (REP 1.5).
6. Remove rear cover (REP 1.6).
7. Remove cutter solenoid assembly.
  - a. Remove cutter solenoid assembly harness from cable clamp.
  - b. Remove J118 at A0 CNC PWB.
  - c. Remove the two screws securing cutter solenoid assembly to the LH frame.
  - d. Remove cutter solenoid assembly.

### Replacement

1. Reposition cutter solenoid bracket.
2. Reposition cutter solenoid plunger pin to engage in cutter solenoid lever. (Figure 1)



**Figure 1. Cutter Solenoid Assembly**

3. Secure cutter solenoid assembly to the LH frame with the two screws.
4. Reinstall in reverse order.

## REP 4.21 Cutter Clutch (continued)

11. Remove printer output drive roller (REP 4.10).
12. Remove pressure roller assembly (REP 4.11).
13. Remove thermal head assembly (REP 4.12).
14. Remove cutter crank arm (REP 4.13).
15. Remove cutter belt.
16. Remove planetary assembly (REP 4.19).
17. Remove cutter crank pulley (REP 4.20).
18. Remove cutter clutch.
  - a. Manually actuate cutter solenoid.
  - b. Remove the cutter clutch.

### Replacement

Reinstall in reverse order.

## REP 4.22 Cutter Solenoid Assembly

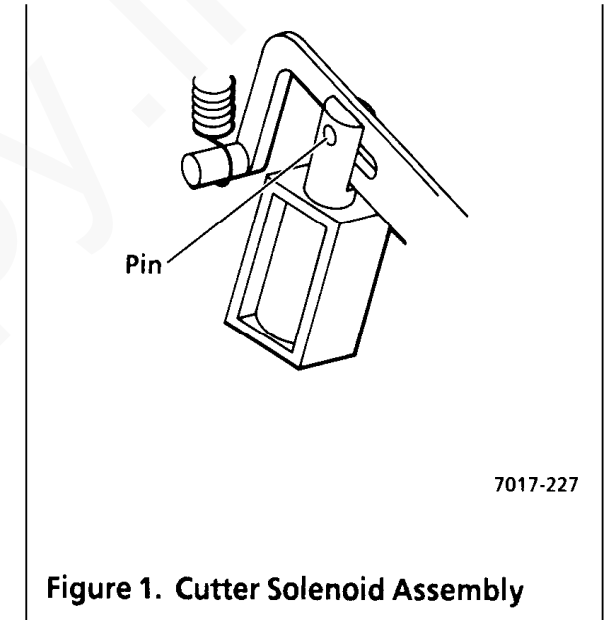
### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove output tray assembly (REP 1.5).
6. Remove rear cover (REP 1.6).
7. Remove cutter solenoid assembly.
  - a. Remove cutter solenoid assembly harness from cable clamp.
  - b. Remove J118 at A0 CNC PWB.
  - c. Remove the two screws securing cutter solenoid assembly to the LH frame.
  - d. Remove cutter solenoid assembly.

### Replacement

1. Reposition cutter solenoid bracket.
2. Reposition cutter solenoid plunger pin to engage in cutter solenoid lever. (Figure 1)



3. Secure cutter solenoid assembly to the LH frame with the two screws.
4. Reinstall in reverse order.

## REP 4.23 Cutter Solenoid Lever

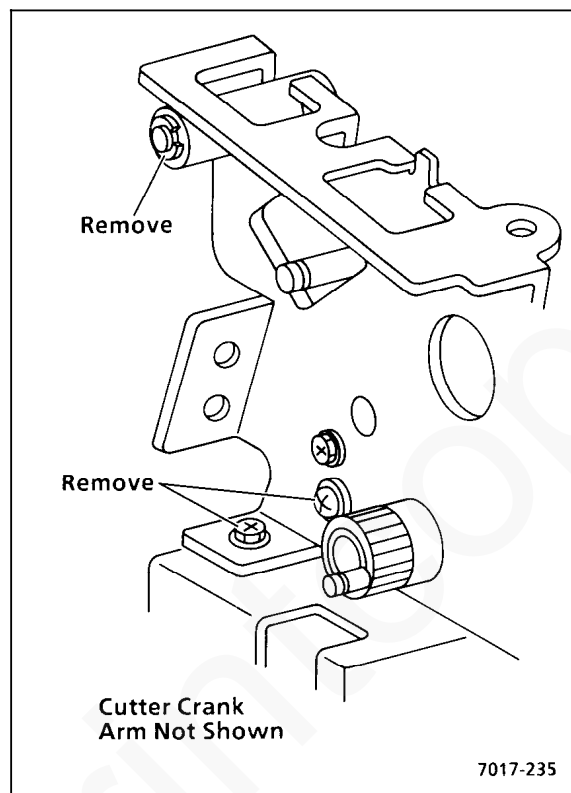
### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove output tray assembly (REP 1.5).
7. Remove rear cover (REP 1.6).
8. Remove recording paper.
9. Remove lower paper guide assembly (REP 4.5).
10. Remove printer motor cover (REP 4.6).
11. Remove pressure roller assembly (REP 4.11).
12. Remove cutter solenoid assembly (REP 4.22).
13. Remove cutter solenoid spring.
14. Remove cutter solenoid lever. (Figure 1)

**NOTE:** If thermal head assembly is removed, skip steps a through d.

- a. Remove E-ring securing LH printer pivot bearing.
- b. Remove screw securing LH frame to power supply housing.
- c. Remove screw (located beneath cutter solenoid lever stud) securing LH frame to base frame.



- d. Gently separate LH frame from base frame to obtain clearance for the removal of the cutter solenoid lever.
- e. Remove cutter solenoid lever from the stud on the LH frame.

#### Replacement

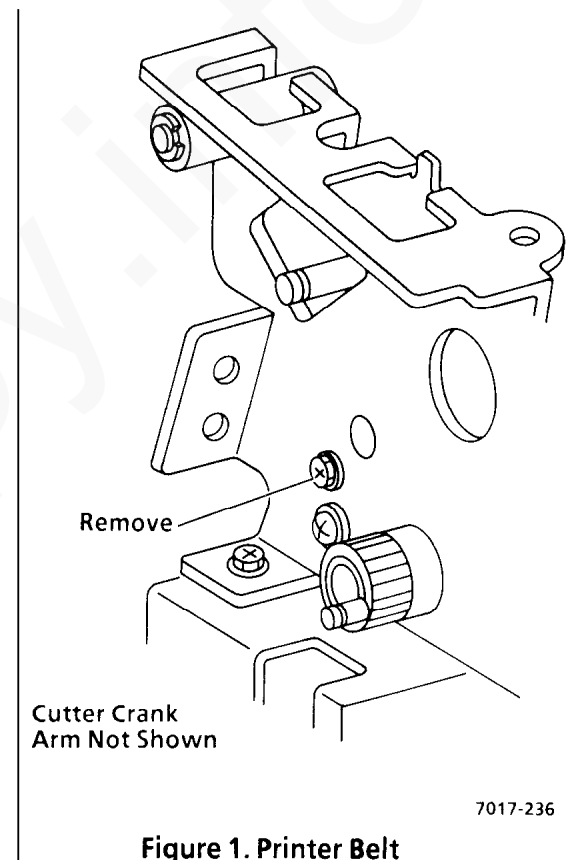
Reinstall in reverse order.

## REP 4.24 Printer Belt

### Parts List on PL 4.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. Remove output tray assembly (REP 1.5).
7. Remove rear cover (REP 1.6).
8. Remove recording paper.
9. Remove lower paper guide assembly (REP 4.5).
10. Remove printer motor cover (REP 4.6).
11. Remove upper printer assembly (REP 4.7).
12. Remove cutter (REP 4.9).
13. Remove printer output drive roller (REP 4.10).
14. Remove pressure roller assembly (REP 4.11).
15. Remove thermal head assembly (REP 4.12).
16. Remove cutter crank arm (REP 4.13).
17. Remove cutter belt.
18. Remove planetary assembly (REP 4.19).
19. Remove cutter crank pulley (REP 4.20).
20. Remove cutter clutch (REP 4.21).
21. Remove cutter solenoid assembly (REP 4.22).
22. Remove cutter solenoid spring.
23. Remove cutter solenoid lever (REP 4.23).
24. Remove printer belt.
  - a. Slide printer belt through gap between base frame and thermal head stud.
  - b. Separate rear of LH frame from printer drive bracket.
    - (1.) Remove screw (located beneath cutter solenoid lever stud) securing LH frame to printer drive bracket. (Figure 1)
    - (2.) Gently separate LH frame from printer drive bracket to obtain clearance for the removal of the printer belt.
  - c. Remove printer belt.



#### Replacement

Reinstall in reverse order.



## REP 5.1 A6 Control Panel and/or Control Panel Assembly

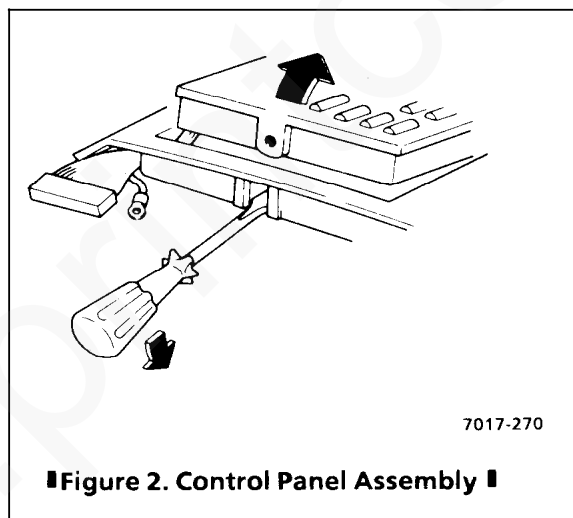
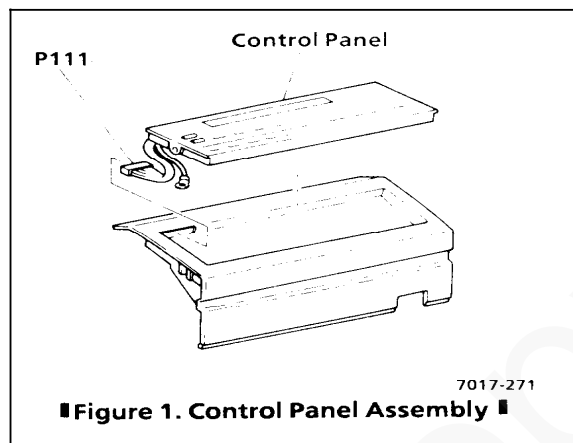
### Parts List on PL 5.2

### Removal

#### CAUTION

Follow electrostatic discharge precautions (Section 6). Static electricity can damage this component.

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove scan support assembly.
6. Remove control panel assembly.
  - a. Disconnect J111 at A0 CNC PWB. (Figure 1)
  - b. Remove screw securing ground wire to LH frame.
  - c. Remove control panel assembly harness from cable clamp.
  - d. Remove remaining screw securing control panel assembly to upper scan cover.
  - e. Raise control panel assembly above upper scan cover. (Figure 2)
  - f. Thread control panel assembly harness through the cutout in upper scan cover.



### Replacement

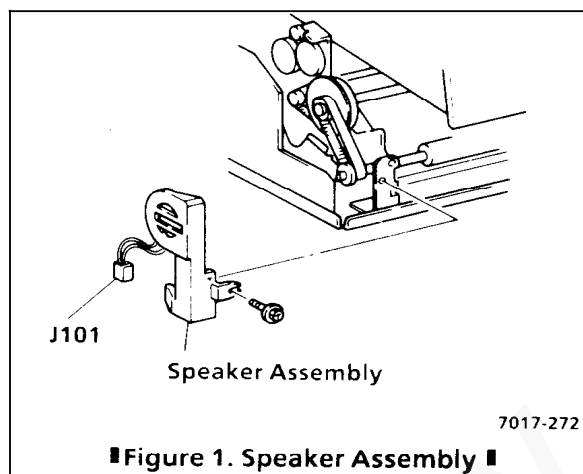
1. Replace overlays as needed.
2. Reinstall in reverse order.

## REP 5.2 Speaker Assembly

### Parts List on PL 5.2

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove speaker assembly. (Figure 1)
  - a. Disconnect J101 from A0 CNC PWB.
  - b. Remove screw securing speaker bracket to LH frame.
  - c. Lift speaker assembly up to clear base plate, then forward to remove.



#### Replacement

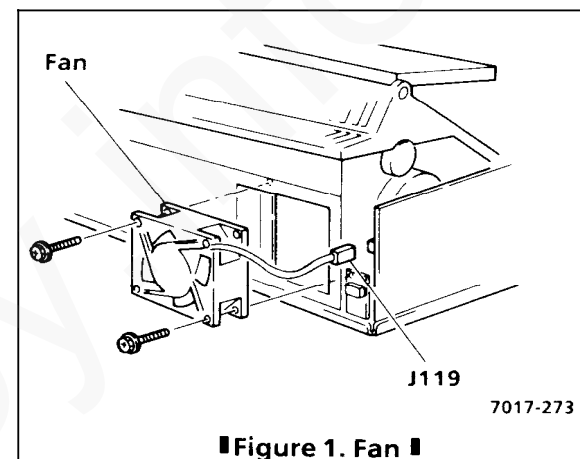
Reinstall in reverse order.

## REP 5.3 Fan

### Parts List on PL 5.1

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. Remove output tray assembly (REP 1.5).
6. Remove rear cover (REP 1.6).
7. Remove fan. (Figure 1)
  - a. Remove fan harness from cable clamp.
  - b. Disconnect J119 from A0 CNC PWB.
  - c. Remove the two screws securing fan to power supply housing.
  - d. Remove fan from cutout in power supply housing.



#### Replacement

Reinstall in reverse order.

## REP 5.4 A8 Store & Forward PWB    REP 5.5 A2 Main PWB

### Parts List on PL 5.3

#### Removal

##### CAUTION

*Follow electrostatic discharge precautions (Section 6). Static electricity can damage this component.*

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove A8 store & forward PWB.
  - a. Loosen the two screws securing A8 store & forward PWB to power supply assembly.
  - b. Loosen the one screw securing A8 store & forward PWB to the RH frame.
  - c. Remove A8 store & forward PWB.

#### Replacement

1. Align connectors on the two PWB.
2. **USO:** Ensure ground plate contacts the top side of the base plate.
3. Reinstall in reverse order.

### Parts List on PL 5.3

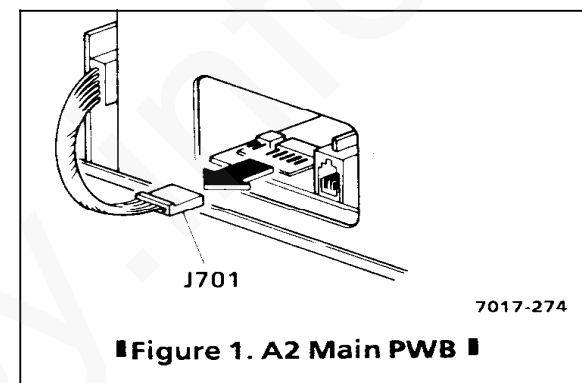
#### Removal

##### CAUTION

*Follow electrostatic discharge precautions (Section 6). Static electricity can damage this component.*

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove RH cover (REP 1.2).
5. If installed, remove A8 store & forward PWB (REP 5.4).
6. Remove A2 main PWB.
  - a. Disconnect J701 at A10 coupler PWB. (Figure 1)
  - b. If necessary, loosen screw securing the PWB retainer (near right rear of A2 main PWB), slide the PWB retainer toward rear of machine, and retighten screw.
7. If replacing A2 main PWB, perform the following:
  - a. Remove A5 modem PWB (REP 5.8).
  - b. Remove A10 coupler PWB (REP 5.9).

*NOTE: Only machines with serial number (TBD) and above have the PWB retainer.*



*Continued*

## REP 5.5 A2 Main PWB (continued)

### Replacement

*NOTE: The E<sup>2</sup>PROM on the A2 Main PWB contains all system data. If it is moved onto a replacement PWB, the system data including the Operator selections and the copy count is retained. However, if a previous problem persists, the old E<sup>2</sup>PROM is a suspect and the new E<sup>2</sup>PROM must be installed and programmed with the Operator selections and system data.*

1. If replacing A2 Main PWB, switch E<sup>2</sup>PROM (U49) on the old and new PWB. (Figure 2)

### CAUTION

*During reinstallation of A2 main PWB, ensure the main standoffs clear the base plate.*

2. Reinstall remaining components in reverse order.

*NOTE: PWB retainer, if installed, need not be positioned to retain A2 Main PWB unless machine is to be shipped.*

3. If the PWB was replaced, check the following and adjust as needed:
  - Cutter Registration (ADJ 5.1)
  - Scan Registration (ADJ 5.2).

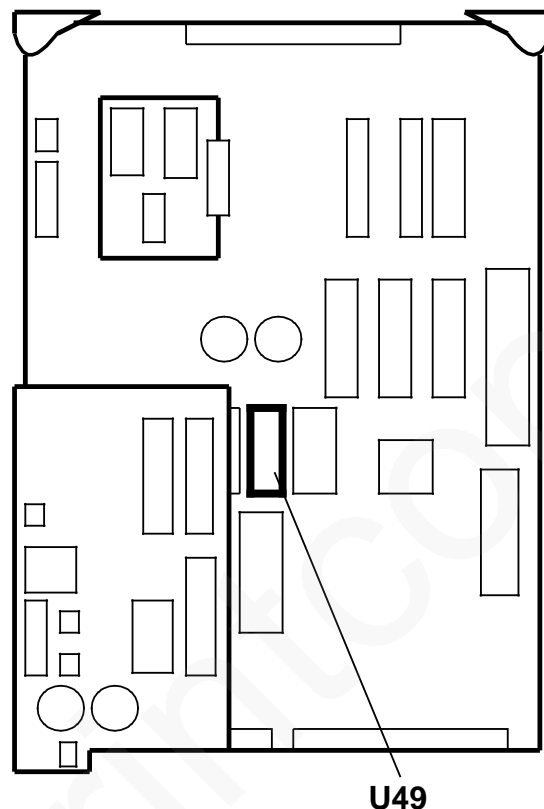


Figure 2. Location of E<sup>2</sup> PROM U49

## REP 5.6 Power Supply Assembly Parts List on PL 5.1

### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. If installed, remove A8 store & forward PWB (REP 5.4).
5. Remove power supply assembly.
  - a. Remove the two screws securing the power supply assembly to the power supply housing.
  - b. Remove power supply assembly.

### Replacement

Reinstall in reverse order.

## REP 5.7 A3 Telephone Line Filter PWB

### Parts List on PL 5.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove LH cover (REP 1.4).
5. **USO:** Remove A3 telephone line filter PWB.
  - a. Remove J901 at A3 telephone line filter PWB.
  - b. Remove screw securing the A3 telephone line filter PWB bracket to base plate.

#### Replacement

Reinstall in reverse order.

## REP 5.8 A5 Modem PWB

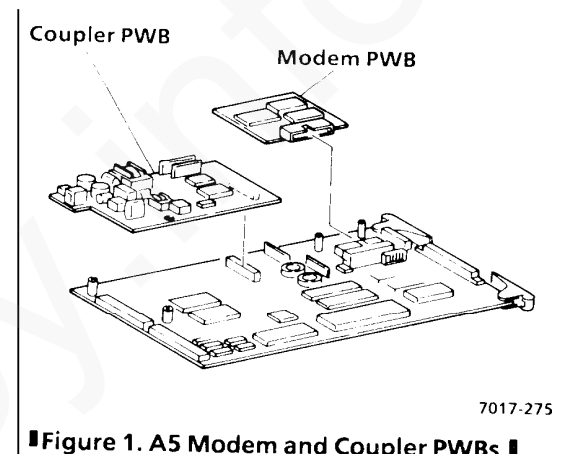
### Parts List on PL 5.3

#### Removal

##### CAUTION

*Follow electrostatic discharge precautions (Section 6). Static electricity can damage this component.*

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove RH cover (REP 1.2).
5. If installed, remove A8 store & forward PWB (REP 5.4).
6. Remove A2 main PWB (REP 5.5).
7. Remove A5 modem PWB. (Figure 1)
  - a. Remove A5 modem PWB from the two modem standoffs.
  - b. Remove A5 modem PWB from J4.



■ Figure 1. A5 Modem and Coupler PWBs ■

#### Replacement

Reinstall in reverse order.

## REP 5.9 A10 Coupler PWB

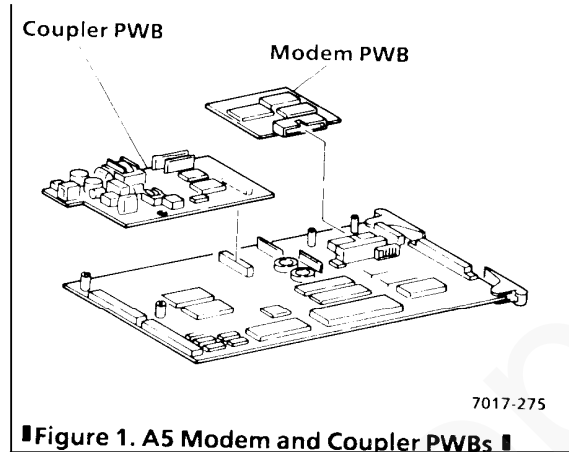
### Parts List on PL 5.3

#### Removal

##### CAUTION

*Follow electrostatic discharge precautions (Section 6). Static electricity can damage this component.*

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove coupler cover (REP 1.3).
4. Remove RH cover (REP 1.2).
5. If installed, remove A8 store & forward PWB (REP 5.4).
6. Remove A2 main PWB (REP 5.5).
7. Remove A10 coupler PWB. (Figure 1)
  - a. Remove A10 coupler PWB from the two coupler standoffs and J3.
  - b. Record the position of all bits on any switches on A10 PWB.
  - c. Record the position of all links on A10 PWB.



■ Figure 1. A5 Modem and Coupler PWBs ■

#### Figure 1. A5 Modem and Coupler PWBs Replacement

1. Position all bits as recorded in Removal.
2. Position all links as recorded in Removal.
3. Reinstall in reverse order.

## REP 5.10 CNC PWB Assembly

### Parts List on PL 5.4

#### Removal

1. Remove power cord.
2. Remove document catch tray assembly (REP 1.1).
3. Remove RH cover (REP 1.2).
4. Remove coupler cover (REP 1.3).
5. Remove LH cover (REP 1.4).
6. If installed, remove A8 store & forward PWB (REP 5.4).
7. Remove A2 main PWB (REP 5.5).
8. Remove power supply assembly (REP 5.6).
9. Remove CNC PWB assembly.
  - a. Cut the two cable ties securing wire harnesses to A0 CNC PWB.
  - b. Remove cable clamp from CNC bracket.
  - c. Disconnect all jacks, except J120, from A0 CNC PWB.
  - d. Remove the three screws securing EME bracket and EME shield to base plate.
  - e. Remove EME bracket.
  - f. Remove screw securing CNC bracket to power supply housing.
  - g. Remove CNC PWB assembly.
  - h. Disconnect J120.

*Continued*

## REP 5.10 CNC PWB Assembly (continued)

### Replacement

1. Connect J120.
2. Reinstall CNC PWB assembly.
3. Ensure A0 CNC PWB is positioned in the locating tabs on the base plate.
4. Position CNC bracket to align locating hole and point, then secure with screw.
5. Reinstall and/or replace remaining components in reverse order.

## ADJ 5.1 Cutter Registration

### Purpose

The purpose is to time the cutter actuation so that paper is cut at the trail edge of the image.

### Check

1. Clean the pressure roller.
  - a. Open printer and remove recording paper.
  - b. Clean the exposed area of the pressure roller using Xerox CLEAN-UPS. Rotate the roller to clean the complete roller surface.
  - c. Reload recording paper and close printer.
2. Enter Service Mode.
3. Print four test patterns.
  - a. Select Menu 61.
  - b. Press the Start button.
  - c. The test pattern will continue to print until the Stop button is pressed. Press the Stop button after the fourth test pattern is cut.
  - d. Retain the second, third, and fourth test patterns for step 4.
4. Verify the cutter registration.
  - a. Examine the second, third, and fourth test patterns for five horizontal lines at both the lead edge and the trail edge.
  - b. Examine the second, third, and fourth test patterns for a maximum of 2 mm of white on the trail edge.

- c. If the printed test patterns vary by more than 1 mm, correct the varying registration problem (RAP 2.3.6), then recheck cutter registration.

*NOTE: For the next two checks, pick the test pattern that best represents the average position of the three test patterns.*

- d. If five lines are printed at lead edge and trail edge of copy and less than 2 mm of white is on the trail edge (Figure 2), the cutter registration is correct.
- e. If six or more lines are printed on the lead edge and four or less lines are printed on trail edge (Figure 1) or more than 2 mm of white is on the trail edge (Figure 3), perform the cutter registration adjustment.

### Adjustment

1. Perform the Check to verify that cutter registration needs adjustment.
2. Verify that the Service mode is selected.
3. Determine current Systems Data Setup for cutter registration.
  - a. Select Menu 22 to print Options Report.
  - b. Press the Start button.
  - c. Highlight Systems Data Setup No. 10 and the corresponding DATA.
4. Determine adjustment needed.
  - a. Compare the test patterns from the cutter registration check to the test patterns in Figures 1 through 3.

**Continued**



## REP 5.10 CNC PWB Assembly (continued)

### Replacement

1. Connect J120.
2. Reinstall CNC PWB assembly.
3. Ensure A0 CNC PWB is positioned in the locating tabs on the base plate.
4. Position CNC bracket to align locating hole and point, then secure with screw.
5. Reinstall and/or replace remaining components in reverse order.

## ADJ 5.1 Cutter Registration

### Purpose

The purpose is to time the cutter actuation so that paper is cut at the trail edge of the image.

### Check

1. Clean the pressure roller.
  - a. Open printer and remove recording paper.
  - b. Clean the exposed area of the pressure roller using Xerox CLEAN-UPS. Rotate the roller to clean the complete roller surface.
  - c. Reload recording paper and close printer.
2. Enter Service Mode.
3. Print four test patterns.
  - a. Select Menu 61.
  - b. Press the Start button.
  - c. The test pattern will continue to print until the Stop button is pressed. Press the Stop button after the fourth test pattern is cut.
  - d. Retain the second, third, and fourth test patterns for step 4.
4. Verify the cutter registration.
  - a. Examine the second, third, and fourth test patterns for five horizontal lines at both the lead edge and the trail edge.
  - b. Examine the second, third, and fourth test patterns for a maximum of 2 mm of white on the trail edge.

- c. If the printed test patterns vary by more than 1 mm, correct the varying registration problem (RAP 2.3.6), then recheck cutter registration.

*NOTE: For the next two checks, pick the test pattern that best represents the average position of the three test patterns.*

- d. If five lines are printed at lead edge and trail edge of copy and less than 2 mm of white is on the trail edge (Figure 2), the cutter registration is correct.
- e. If six or more lines are printed on the lead edge and four or less lines are printed on trail edge (Figure 1) or more than 2 mm of white is on the trail edge (Figure 3), perform the cutter registration adjustment.

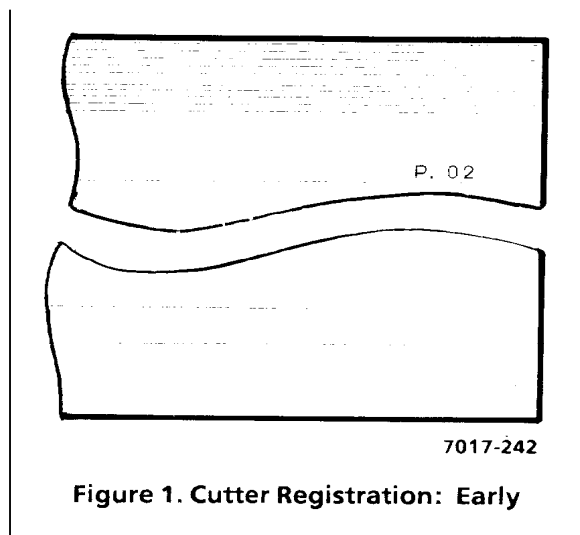
### Adjustment

1. Perform the Check to verify that cutter registration needs adjustment.
2. Verify that the Service mode is selected.
3. Determine current Systems Data Setup for cutter registration.
  - a. Select Menu 22 to print Options Report.
  - b. Press the Start button.
  - c. Highlight Systems Data Setup No. 10 and the corresponding DATA.
4. Determine adjustment needed.
  - a. Compare the test patterns from the cutter registration check to the test patterns in Figures 1 through 3.

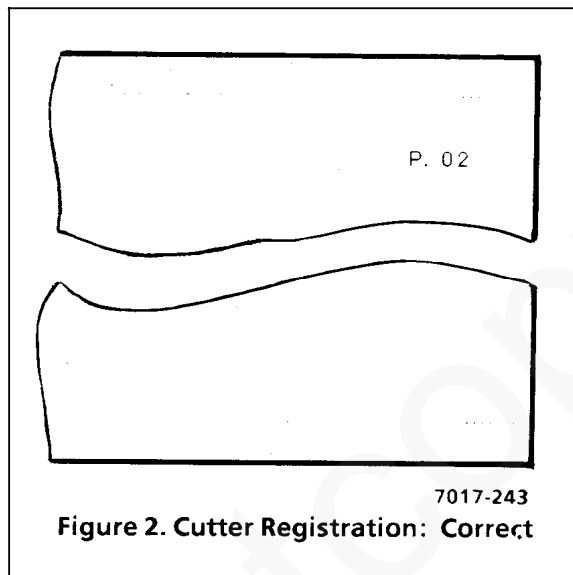
**Continued**

## ADJ 5.1 Cutter Registration (continued)

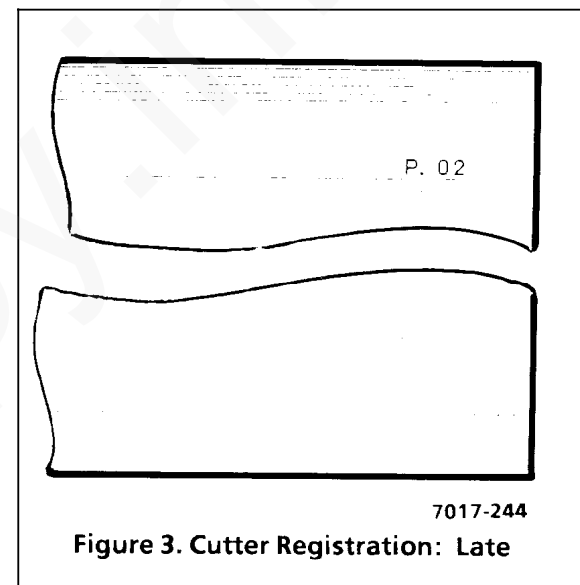
The following test pattern illustrates the cutter registration adjustment too early (negative) resulting in too many lines on lead edge and too few lines on trail edge.



The following test pattern illustrates the cutter registration adjustment when it is correct.



The following test pattern illustrates the cutter registration adjustment too late (positive) resulting in too much white space on trail edge.



*Continued*

## ADJ 5.1 Cutter Registration (continued)

- b. If more than 5 lines were printed on the top of the test patterns, select a bit setting from Table 1 that is two positions more towards positive than your current setting for each extra line that was printed.
- c. If more than 2 mm of white is printed at the bottom of the test pattern, select a bit setting from Table 1 that is one position more towards negative than your current setting for each extra 0.5 mm of white.

5. Adjust System Data Setup No. 10.

- a. Select Menu 81. The display indicates:

```
81  SYSTEM DATA SETUP
    PRESS[START]OR[SCROLL]
```

- b. Press the Start button. The display indicates:

```
81  CAUTION: CHANGE WILL EFFECT OPERATION
    PRESS [START] OR [STOP]
```

- c. Press the Start button. The display indicates:

```
81  SYSTEM DATA NUMBER>01 DATA 00000000
    ENTER 2 DIGIT SYSTEM DATA NUMBER
```

*NOTE: The display returns to Idle after 30 seconds. It is advisable to have the needed information ready to input.*

### CAUTION

*Do not arbitrarily change System Data Parameters. To do so may violate CCITT Standards and cause improper Terminal operations.*

- d. Enter the System Data Setup No: **10**.
- e. Press Enter.

**Continued**

**Table 1**  
**System Data: 10**

Description	Bit No.	Bit Definition			Default	
		0		1	USO	RX
Scan registration (mm)	0	<b>3210</b> 0000: -4.0	<b>3210</b> 0110: -1.0	<b>3210</b> 1100: +2.0	0	0
	1	0001: -3.5 0010: -3.0	0111: -0.5 1000: ±0	1101: +2.5 1110: +3.0	0	0
	2	0011: -2.5 0100: -2.0	1001: +0.5 1010: +1.0	1111: +3.5	0	0
	3	0101: -1.5	1011: +1.5		1	1
Cutter registration (mm)	4	<b>7654</b> 0000: -4.0	<b>7654</b> 0110: -1.0	<b>7654</b> 1100: +2.0	0	0
	5	0001: -3.5 0010: -3.0	0111: -0.5 1000: ±0	1101: +2.5 1110: +3.0	0	0
	6	0011: -2.5 0100: -2.0	1001: +0.5 1010: +1.0	1111: +3.5	0	0
	7	0101: -1.5	1011: +1.5		1	1

## ADJ 5.1 Cutter Registration (continued)

*NOTE: The Display example below is an enlargement of the Data bit numbers as seen in the display. Above it are the corresponding bit numbers found in Table 1.*

**BITS    7   6   5   4   3   2   1   0**

<b>DATA   1   0   0   0   1   0   0   0</b>
---

- f. Press the Select button to move the cursor beneath the bit number (7, 6, 5, or 4) you wish to change.
  - g. Press the number "1" or "0" on the keypad.
  - h. Move the cursor to the next bit number or press Enter to effect the change.
  - j. Press Stop. The terminal will reboot and retain the changes.
6. Verify that new setting achieves the correct position by performing the Check again. Reposition as needed.
  7. Check the scan registration. (ADJ 6.2)

## ADJ 5.2 Scan Registration

### Purpose

The purpose is to time the scanner so that both the lead edge and the trail edge is printed.

### Check

*NOTE: The cutter registration Check / Adjustment (ADJ 5.1) must be correct prior to checking the Scan registration.*

1. Clean the following using Xerox CLEAN-UPS:
  - a. ADF belt
  - b. retard roller
  - c. lower scanner drive rollers
  - d. platen roller
  - e. upper scanner idler rollers
2. Make three single copies of test pattern 82P151.

3. Verify the scan registration.
  - a. Examine copies for tips of the registration arrows on both the lead edge and the trail edge.
  - c. If the copies vary by more than 1 mm, correct the varying registration problem (RAP 2.3.6), then recheck scan registration.
  - d. If registration arrows on the lead edge are equal to the registration arrows on the trail edge (Figure 2), the scan registration is correct.
  - e. If registration arrows on the lead edge are not equal to the ones on the trail edge (Figures 1 and 3), perform the scan registration adjustment.

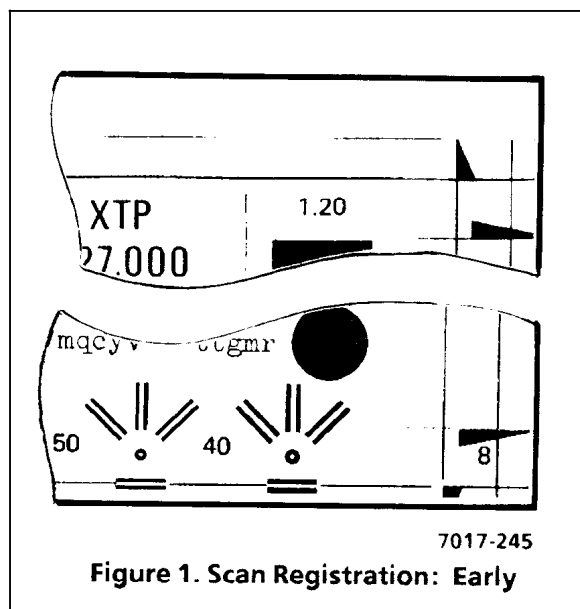
### Adjustment

1. Perform the Check to verify that scan registration needs adjustment.
2. Enter Service Mode.
3. Determine current Systems Data Setup for cutter registration.
  - a. Select Menu 22 to print Options Report.
  - b. Press the Start button.
  - c. Highlight Systems Data Setup No. 10 and the corresponding DATA.
4. Determine adjustment needed.
  - a. Compare the test patterns from the scan registration check to the test patterns in Figures 1 through 3.

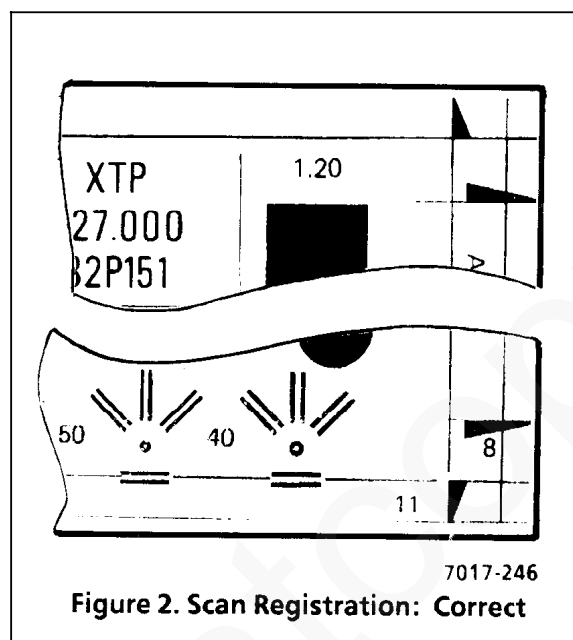
**Continued**

## ADJ 5.2 Scan Registration (continued)

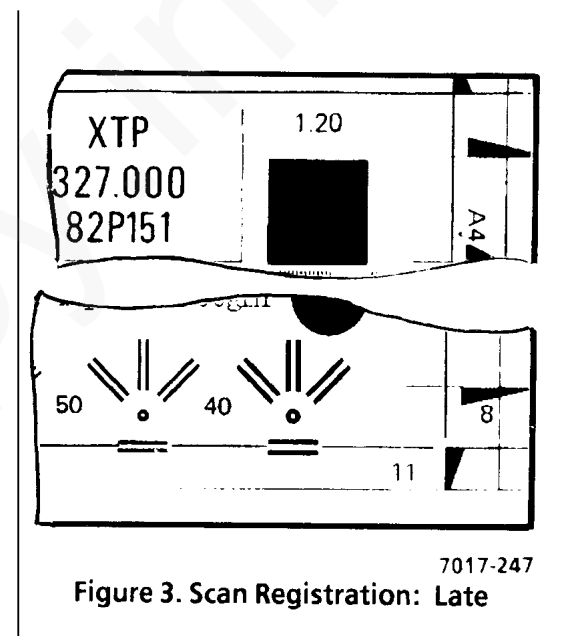
The following test pattern illustrates the scan registration adjustment too early (negative) resulting in the trail edge registration arrow being cut off.



The following test pattern illustrates the scan registration adjustment when it is correct.



The following test pattern illustrates the scan registration adjustment too late (positive) resulting in the lead edge registration arrow being cut off.



*Continued*

## ADJ 5.2 Scan Registration (continued)

- b. If the trail edge registration arrow was cut off, select a bit setting from Table 1 that is one position more towards positive than your current setting for each 0.5 mm that was cut off.
- c. If the lead edge registration arrow was cut off, select a bit setting from Table 1 that is one position more towards negative than your current setting for each 0.5 mm that was cut off.

5. Adjust System Data Setup No. 10.

- a. Select Menu 81. The display indicates:

81 SYSTEM DATA SETUP  
PRESS[START]OR[SCROLL]

- b. Press the Start button. The display indicates:

81 CAUTION: CHANGE WILL EFFECT OPERATION  
PRESS [START] OR [STOP]

- c. Press the Start button. The display indicates:

81 SYSTEM DATA NUMBER>01 DATA 00000000  
ENTER 2 DIGIT SYSTEM DATA NUMBER

*NOTE: The display returns to Idle after 30 seconds. It is advisable to have the needed information ready to input.*

### CAUTION

*Do not arbitrarily change System Data Parameters. To do so may violate CCITT Standards and cause improper Terminal operations.*

- d. Enter the System Data Setup No: **10**.
- e. Press Enter.

**Continued**

**Table 1  
System Data: 10**

Description	Bit No.	Bit Definition			Default	
		0	1		USO	RX
<b>Scan registration (mm)</b>	0	<b>3210</b> 0000: -4.0	<b>3210</b> 0110: -1.0	<b>3210</b> 1100: +2.0	0	0
	1	0001: -3.5 0010: -3.0	0111: -0.5 1000: ±0	1101: +2.5 1110: +3.0	0	0
	2	0011: -2.5 0100: -2.0	1001: +0.5 1010: +1.0	1111: +3.5	0	0
	3	0101: -1.5	1011: +1.5		1	1
Cutter registration (mm)	4	<b>7654</b> 0000: -4.0	<b>7654</b> 0110: -1.0	<b>7654</b> 1100: +2.0	0	0
	5	0001: -3.5 0010: -3.0	0111: -0.5 1000: ±0	1101: +2.5 1110: +3.0	0	0
	6	0011: -2.5 0100: -2.0	1001: +0.5 1010: +1.0	1111: +3.5	0	0
	7	0101: -1.5	1011: +1.5		1	1



## ADJ 5.2 Scan Registration (continued)

*NOTE: The Display example below is an enlargement of the Data bit numbers as seen in the display. Above it are the corresponding bit numbers found in Table 1.*

**BITS    7   6   5   4   3   2   1   0**

<b>DATA   1   0   0   0   1   0   0   0</b>
---

- f. Press the Select button to move the cursor beneath the bit number (3, 2, 1, or 0) you wish to change.
  - g. Press the number "1" or "0" on the keypad.
  - h. Move the cursor to the next bit number or press Enter to effect the change.
  - j. Press Stop. The terminal will reboot and retain the changes.
6. Verify that new setting achieves the correct position by performing the Check again. Reposition as needed.

## 5. Parts List

- Parts List Introduction [5-2](#)

### Covers and Panels

- PL 1.1 Trays [5-3](#)
- PL 1.2 Covers [5-4](#)
- PL 1.3 Frames [5-5](#)

### ADF

- PL 2.1 Upper ADF [5-6](#)
- PL 2.2 Lower ADF [5-7](#)

### Scanner

- PL 3.1 Upper Scan Electronics [5-8](#)
- PL 3.2 Upper Scan Drives [5-9](#)
- PL 3.3 Lower Scan [5-10](#)

### Printer

- PL 4.1 Upper Printer [5-11](#)
- PL 4.2 Cutter and Pressure Roller [5-12](#)
- PL 4.3 Thermal Head [5-13](#)
- PL 4.4 Printer Drives [5-14](#)

### Electronics

- PL 5.1 Power Supply [5-15](#)
- PL 5.2 Control Panel and Speaker [5-16](#)
- PL 5.3 PWBs and Handset [5-17](#)
- PL 5.4 CNC PWB and Line Filter [5-18](#)
- PL 5.5 CNC Wire Harnesses [5-19](#)

### Miscellaneous

- PL 6.1 Electrical Connectors [5-20](#)
- Common Hardware [5-21](#)
- Parts Number Index [5-22](#)

# Parts List Introduction

## Overview

The Parts List section gives parts lists and illustrations of spared subsystem components. It gives information needed to order parts used on the system as well as to repair and replace them.

## Organization

Section contents gives page references for all subsections in the parts list.

## Parts Lists (PL)

Each PL gives parts numbers of spared subsystem components. Item numbers are given in the parts lists to reference components on the exploded views.

## Exploded Views

Exploded illustrations of spared subsystem components are included with each PL. Components on the illustrations are given item numbers. Hardware items are lettered. Item numbers on the illustration are the same as item numbers on the PL. Refer to Common Hardware to identify hardware.

Assemblies and kits are a combination of several separate components. These are identified on the illustration with the Part Listing item number followed by illustration numbers that make up the assembly. For example: "15 {5, 6, and 10."

## Electrical Connectors

The last PL contains illustrations of electrical connectors and a corresponding parts list.

## Common Hardware

This subsection identifies common hardware used in the system. The hardware is listed in alphabetical order by the item letter. Item letters are used on the exploded views to designate hardware in this list. All dimensions are in millimeters unless otherwise noted.

## Part Number Index

This subsection lists, by number, all the spared parts in the system. It gives PL references for the parts list of each spared part.

## General Information

### Symbols

Within the illustrations, and in the listings, various symbols are used. Refer to Introduction, Symbolology for definitions.

The asterisk \* appears in the parts listing and applies to Xerox USO and RX distribution. The asterisk indicates that the part can be ordered only through Telecopier Product Support (USO) or CSO (RX).

### Abbreviations

Abbreviations which may be used in the parts lists text or illustrations are as follows:

A	AMP
USO	United States Operations
FX	Fuji Xerox
P/J	Plug/Jack
P/O	Part of
P/OTag/MOD	Part of Tag/MOD
OLV	USO Olivetti FX 1500
PWB	Printed Wiring Board
RX	Rank Xerox

Tag/MOD	Tag/Modification
V	Volt
W	Watt
W/	With
W/Tag/MOD	With Tag/Modification
W/O	Without
W/O Tag/MOD	Without Tag/Modification
XCI	Xerox Canada Inc.
XLA	Xerox Latin America Group

## Tag/MODs

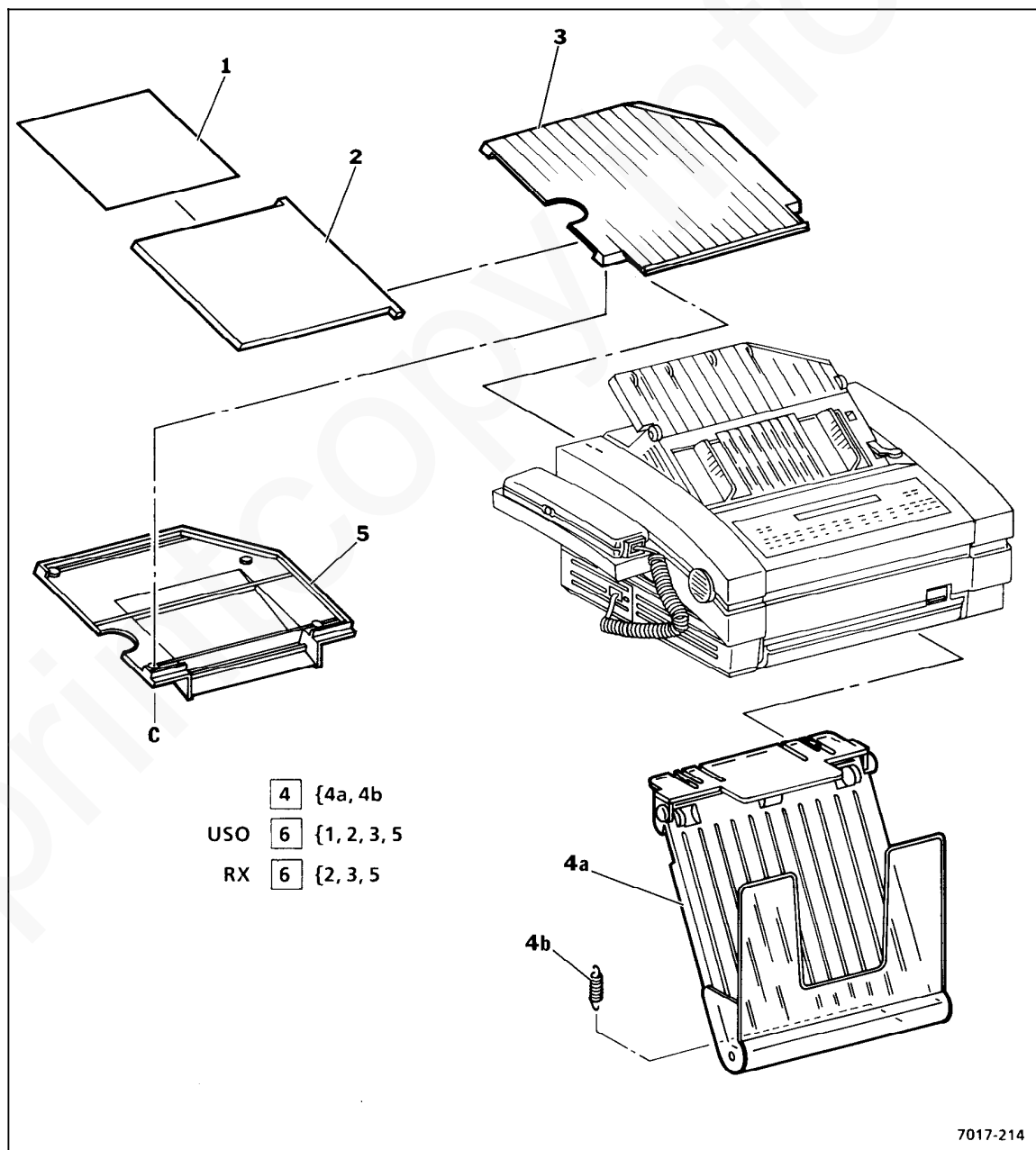
A Tag/MOD is used when a part or area of the system has been modified. The Change Tag/MOD Index, which is found in the General Procedures/Information Section, lists the name and purpose of the Tag/MOD. In some cases, you will go to the parts lists and find a part number listed as "with Tag/MOD." Go to the Change Tag/MOD Index for a description of what the Tag/MOD is and what you need to install the Tag/MOD. The Change Tag/MOD Index will either list a kit number (600K...) or indicate "piece part." If "piece part" is indicated, the parts lists reference(s) will be given and all parts associated with the Tag/MOD will have to be individually located, ordered, and installed.

The notation "P/O Tag/MOD" after a part number indicates that the item is part of a Tag/MOD. The notation "Tag/MOD" after a part number will be used only to indicate the entire Tag/MOD, whether that is a kit number or an individual part.

Whenever you install a Tag/MOD kit or all the piece parts that make up a Tag/MOD, mark the appropriate number on the Tag/MOD matrix. PL 1.3 shows the Tag/MOD matrix location.

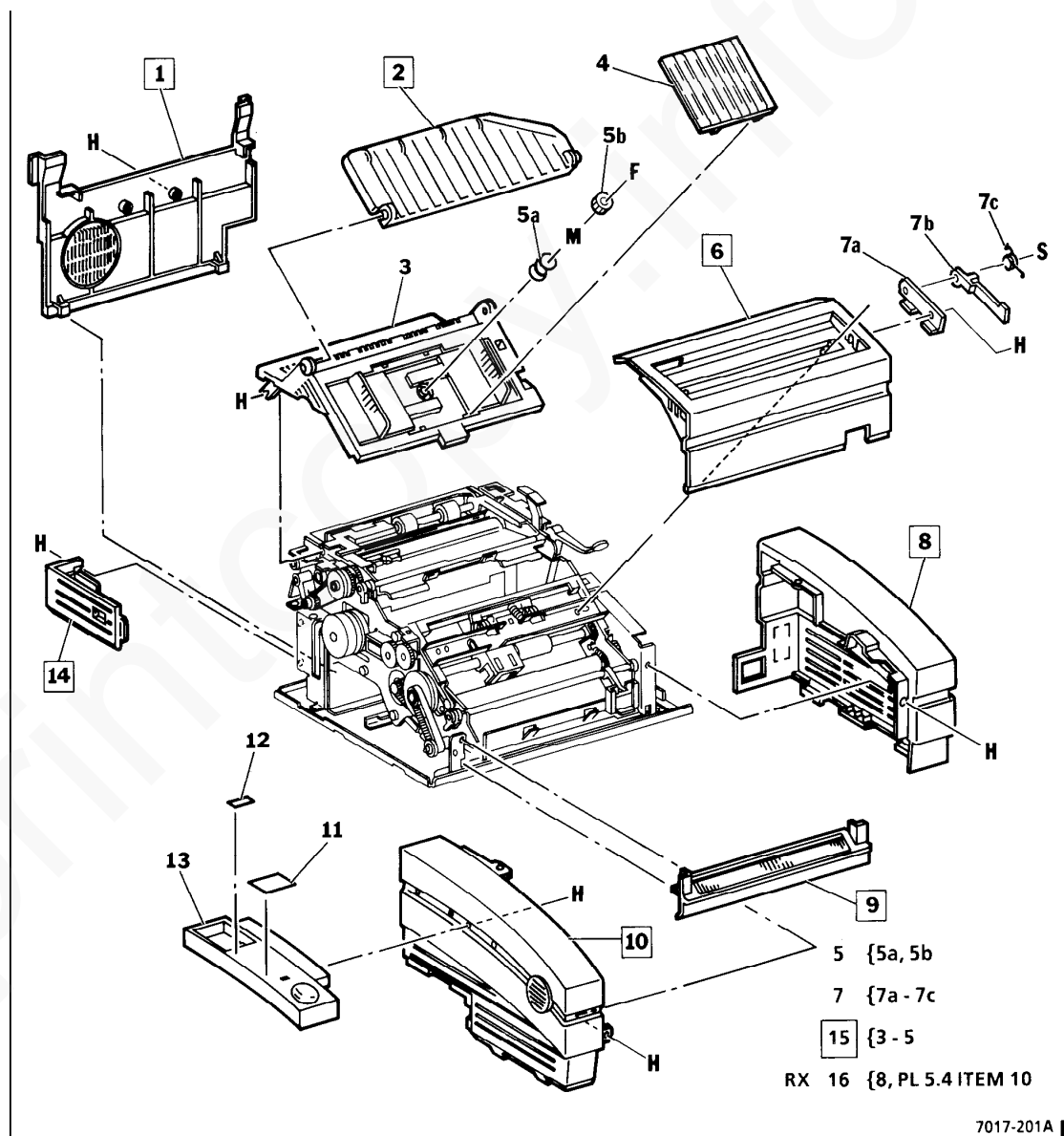
## PL 1.1Trays

Item	Part	Description
1	045E95741	Operator Guide (USO)
2	002K84571	Operator Guide Jacket
3	--	Output Tray
4	073K98042	Document Catch Tray Assembly
4a	--	Catch Tray
4b	009E85170	Catch Tray Spring
5	--	Output Tray Base
6	073K98032	Output Tray Assembly (USO)
-	073K98671	Output Tray Assembly (RX)



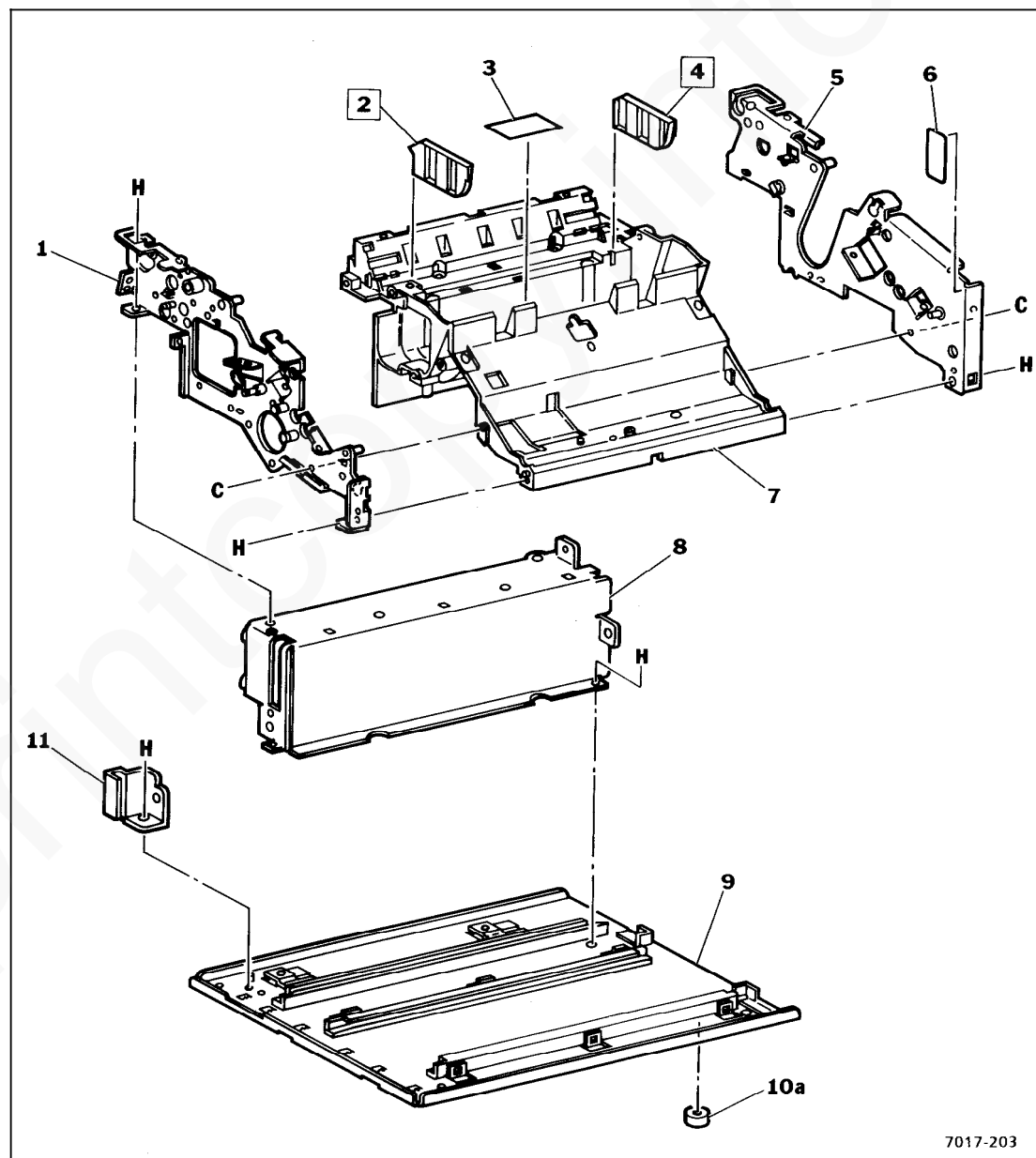
## PL 1.2Covers

Item	Part	Description
1	002K79750	Rear Cover (USO)
-	002K77021	Rear Cover (RX)
-	048K95020	Rear Cover (OLV)
2	050E95812	Input Tray Extension
3	--	Input Tray/Printer Cover (includes LH and RH Document Guides)
4	--	Document Guide Cover
5	--	Document Guide Gear Assembly
5a	--	Document Guide Spring
5b	--	Document Guide Gear
6	002E88644	Upper Scan Cover
-	002E76431	Upper Scan Cover (OLV)
7	--	Scan Support Assembly
7a	--	Scan Support Bracket
7b	031E95680	Scan Support Arm
7c	009E99800	Scan Support Spring
8	002E88693	RH Cover (USO)
-	--	RH Cover (RX) (P/O Item 16)
9	038K96243	Lower Scan Cover
10	002E88663	LH Cover (USO)
-	002E88673	LH Cover (RX)
11	091P66413	Customer Assistance Label (USO)
12	091E77050	Telephone Number Label (USO)
13	068E86002	Handset Cradle (USO)
14	002E88731	Coupler Cover (USO)
-	002E88741	Coupler Cover (RX)
15	002K75243	Input Tray/Printer Cover Assembly
16	499K95949	RH Cover Kit (RX)



## PL 1.3Frames

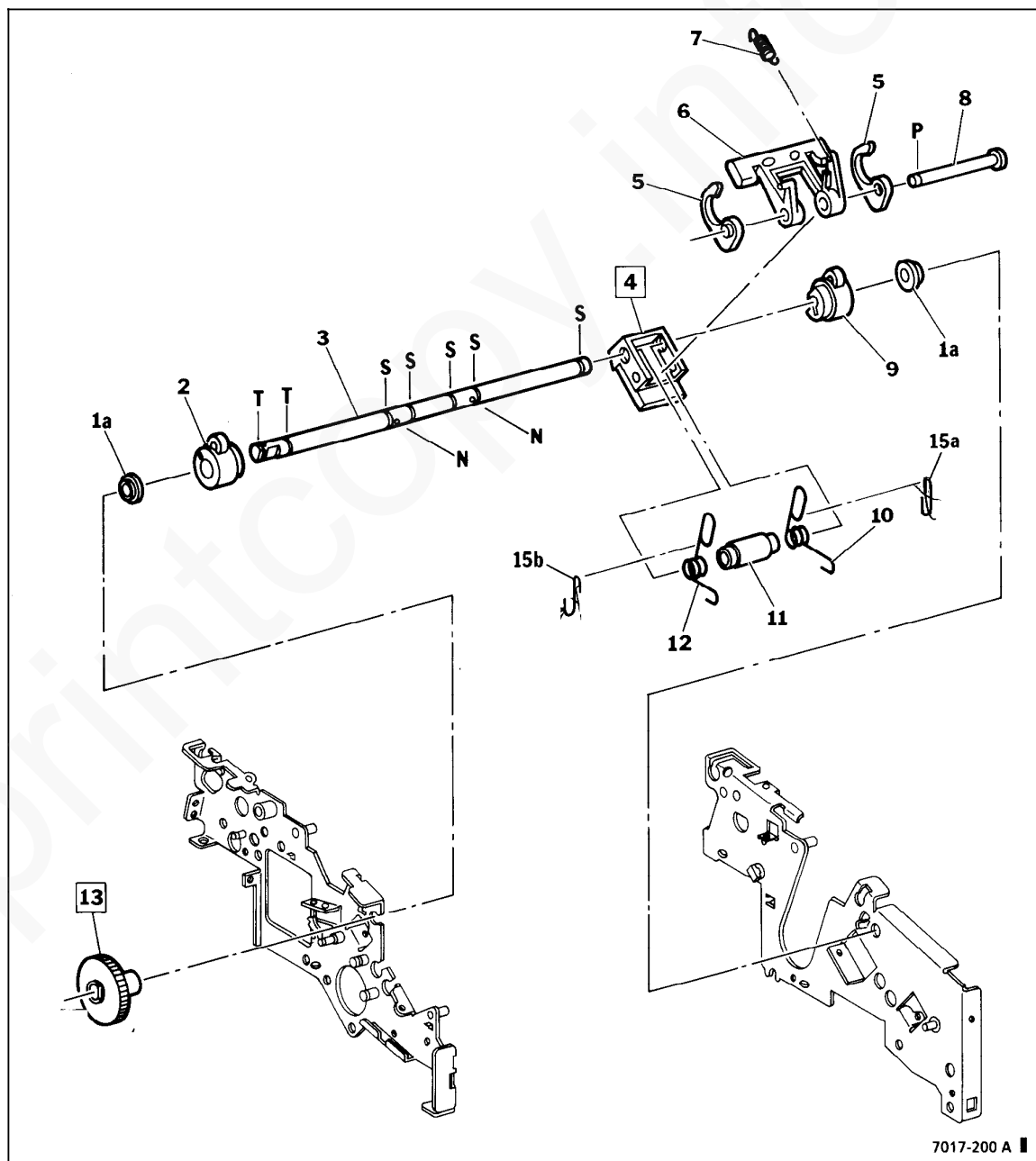
Item	Part	Description
1	--	LH Frame
*2	032E96041	Paper Side Plate #1
3	091P80361	Tag/MOD Matrix
*4	032E96051	Paper Side Plate #2
5	--	RH Frame
6	--	Serial Number Plate
7	--	Base Frame
8	--	Power Supply Housing
9	--	Base Plate
10	499K95609	Feet
10a	--	Foot
11	--	CNC Guide



7017-203

## PL 2.1 Upper ADF

Item	Part	Description
1	499K95601	Bearing #6 Kit
1a	--	Bearing #6
2	--	LH Cam / Stopper
3	--	Retard Shaft
4	499K95613	Pad Assembly (includes Retard Pad and Pad Holder)
5	--	Paper Weight
6	--	Nudger Arm
7	009E98941	Nudger Arm Spring
8	--	Pad Shaft
9	--	RH Cam / Stopper
10	--	RH Retard Spring
11	--	Spring Spacer
12	--	LH Retard Spring
13	007E96870	Nudger Timing Gear
14	006K95781	Retard Assembly
15	499K95736	Spring Hook Kit
15a	--	RH Hook
15b	--	LH Hook



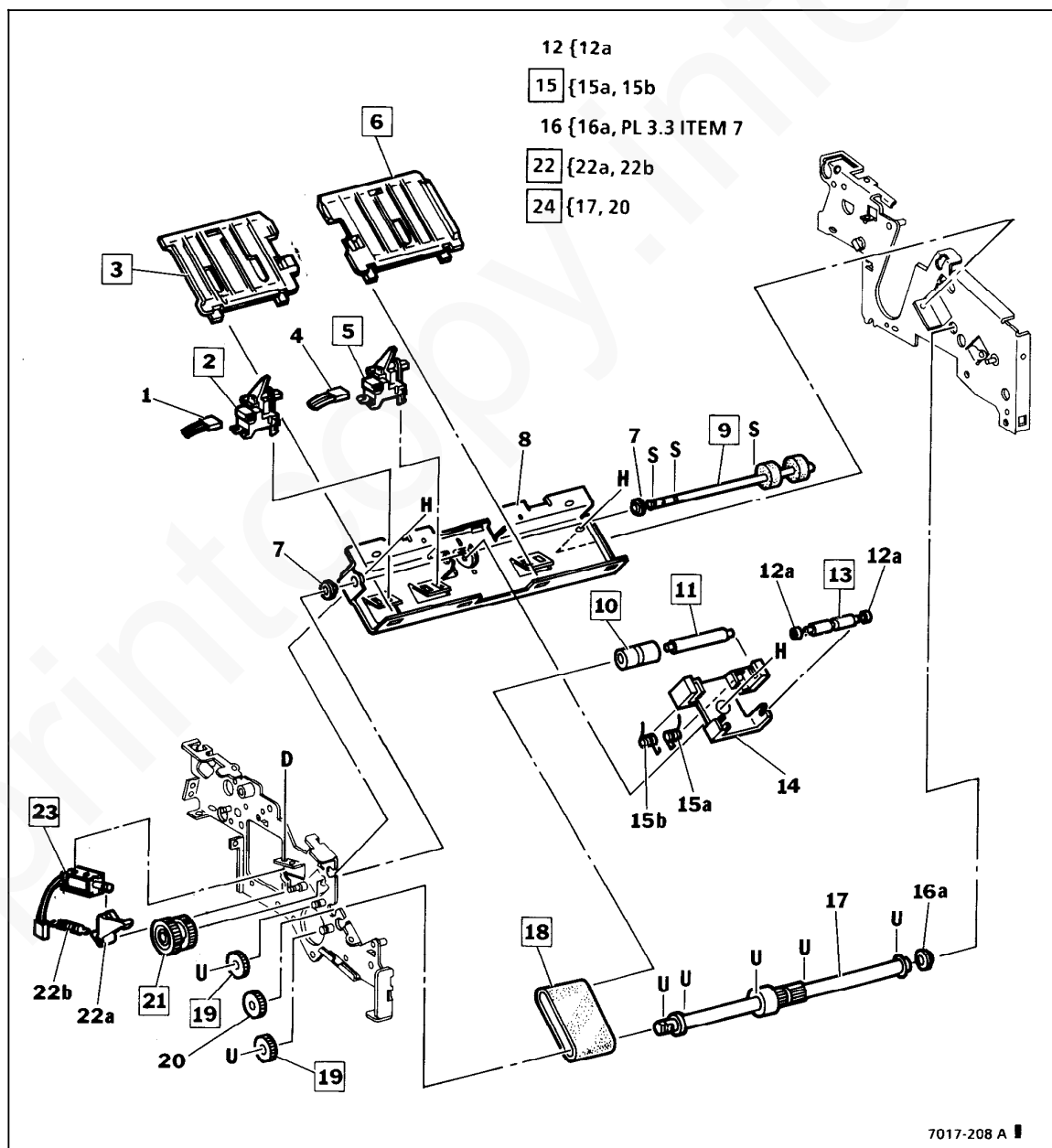
7017-200 A



## PL 2.2 Lower ADF

Item	Part	Description
1	--	J402 (P/O PL 5.5 Item 12)
2	130K96530	Wide Original Sensor
*3	038E96930	LH ADF Guide
4	--	J403 (P/O PL 5.5 Item 11)
5	130K96530	Document Sensor
*6	038E96950	RH ADF Guide
7	--	Bearing #6 (P/O PL 2.1 Item 1)
8	--	ADF Bracket
9	022K85011	Nudger Roller
*10	022P62530	ADF Idler Roller
*11	006E99490	ADF Tension Shaft
12	499K95603	Stop Shaft Bearing Kit
12a	--	Stop Shaft Bearing
*13	006E99480	Stop Shaft
14	--	ADF Block
15	499K95600	ADF Tension Spring Kit
15a	--	RH ADF Tension Spring
15b	--	LH ADF Tension Spring
16	499K95648	Plastic Bearing #8 Kit
16a	--	Plastic Bearing #8
17	--	ADF Drive Shaft (with ADF Drive Clutch)
18	023E96320	ADF Belt
*19	007E96881	ADF Idler Gear
20	--	ADF Drive Gear
21	005E96550	Nudger Clutch (W/O Tag/MOD 5)
	005K95600	Nudger Clutch (Tag/MOD 5)
22	499K95727	Nudger Pawl Kit
22a	--	Nudger Pawl
22b	--	Nudger Pawl Spring
23	121E96121	Nudger Solenoid Assembly **
24	006K95821	ADF Drive Shaft Assembly

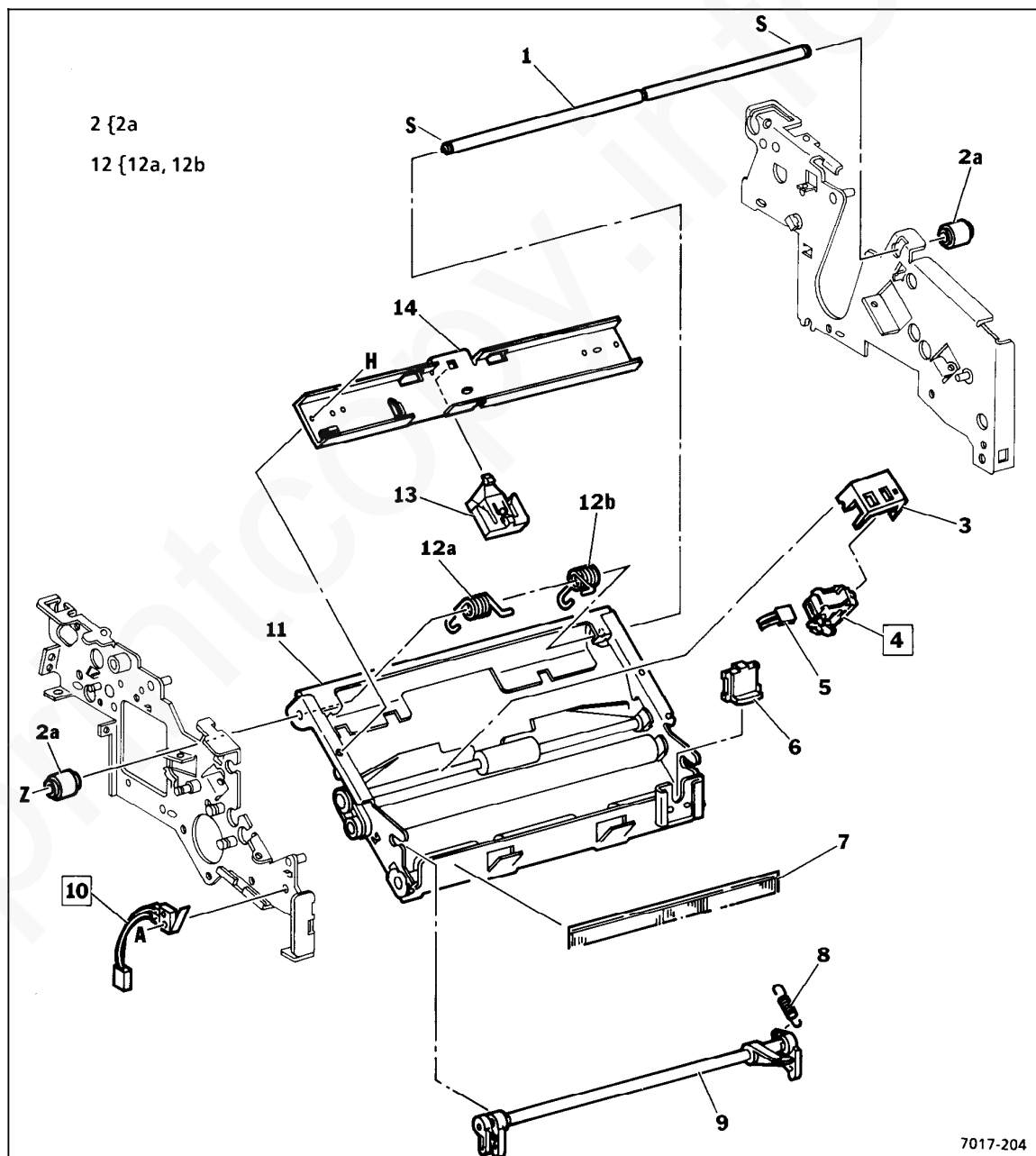
\*\* NOTE: If nudger solenoid assembly is replaced, discard any spring and nylon washer on solenoid plunger.





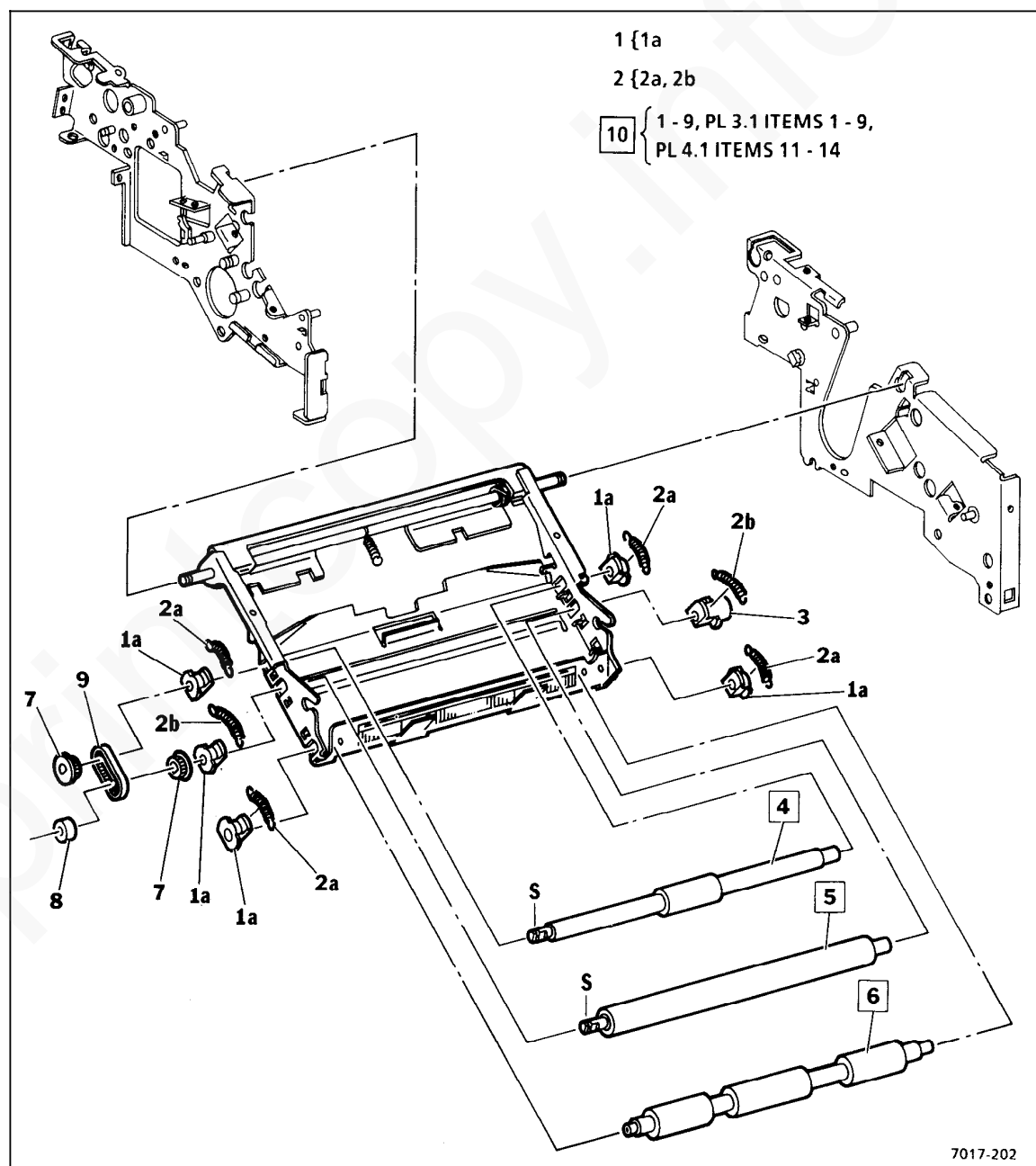
## PL 3.1 Upper Scan Electronics

Item	Part	Description
1	--	Scan Pivot Shaft
2	499K95606	Scan Pivot Bearing Kit
2a	--	Scan Pivot Bearing
3	068E87910	Scan Sensor Bracket
4	130K96540	Scan Position Sensor
5	--	J405 (P/O PL 5.5 Item 7)
*6	003E98170	Scanner Release Bar
*7	125E95160	Upper Scan Static Eliminator
*8	009E98920	Latch Spring
*9	003K96090	Scanner Latch
10	110K95780	Scan Interlock Switch
11	--	Upper Scan Frame
12	499K95607	Scan Pivot Spring Kit
12a	--	LH Scan Pivot Spring
12b	--	RH Scan Pivot Spring
13	003E98240	Retard Stop Pad
14	--	Retard Stop Bracket



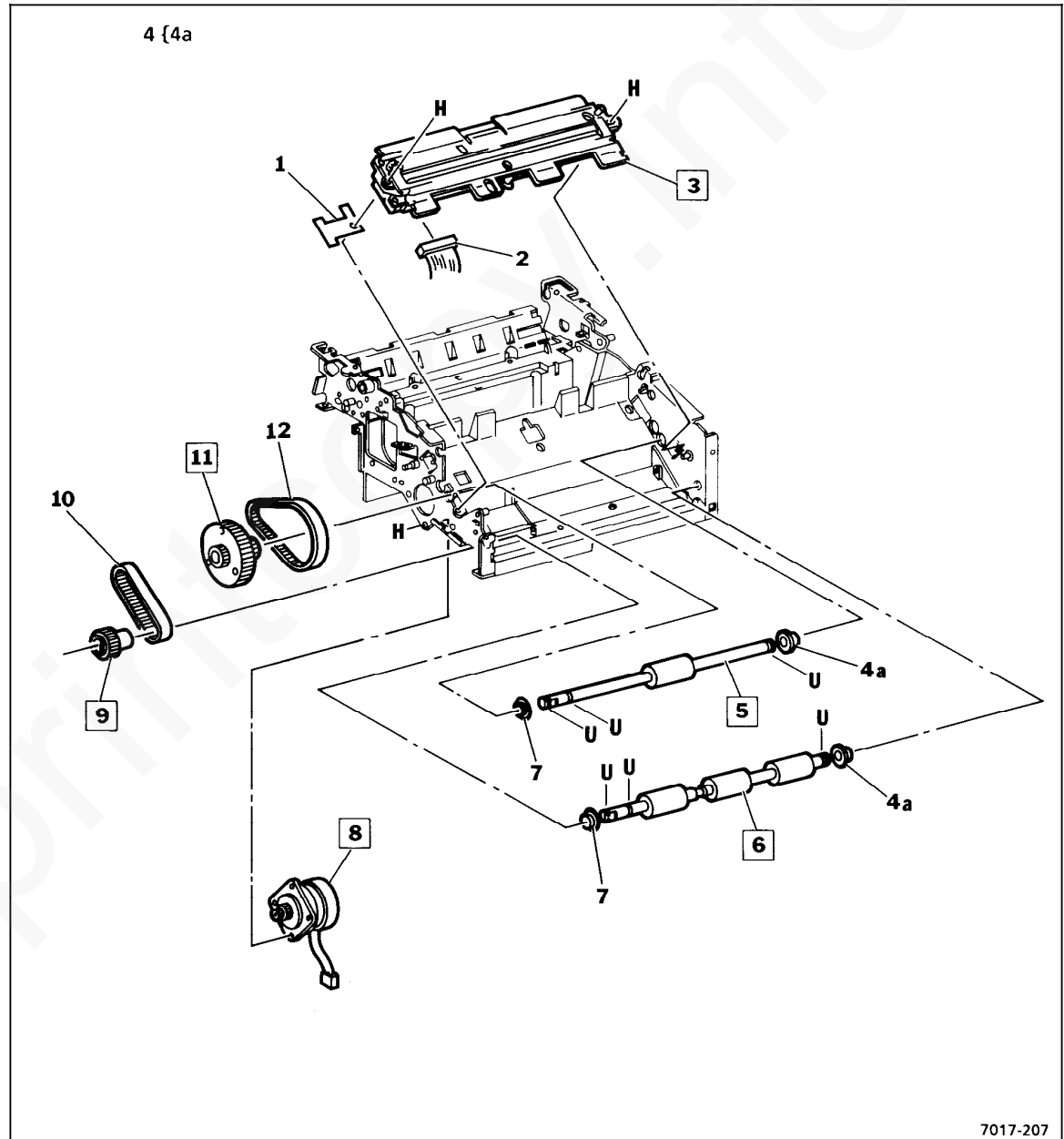
## PL 3.2 Upper Scan Drives

Item	Part	Description
1	499K95605	Upper Scan Bearing Kit
1a	--	Upper Scan Bearing
2	499K95604	Upper Scan Spring Kit
2a	--	Scan Idler Spring
2b	--	Platen Spring
3	013E96640	RH Platen Bearing
4	022K85060	Scan Input Idler Roller
5	022K85051	Platen Roller
6	022K85070	Scan Output Idler Roller
7	020E95990	Platen Pulley
8	--	Platen Spacer
9	023E96130	Platen Belt (45 MXL)
10	--	Upper Scan Assembly



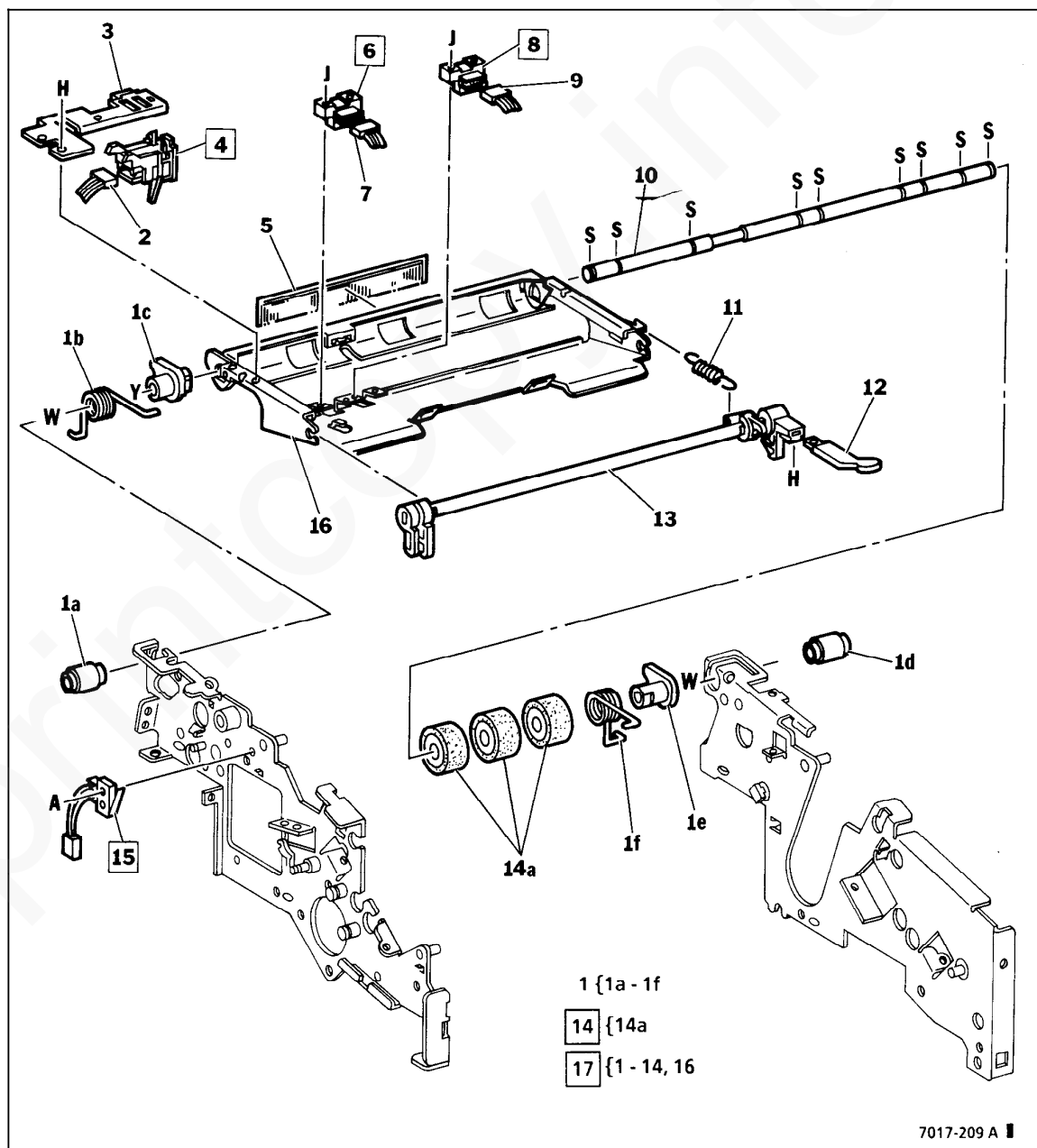
## PL 3.3 Lower Scan

Item	Part	Description
1	--	Scan Belt Bracket
2	--	J201 (P/O PL 5.5 Item 15)
3	130K96551	Video Assembly (with A1 Video PWB, Platen Glass, and Scan Guide)
4	499K95610	Brass Bearing #8 Kit
4a	--	Brass Bearing #8
5	022K85030	Scan Input Drive Roller
6	022K85040	Scan Output Drive Roller
7	--	Plastic Bearing #8 (P/O PL 2.2 Item 16)
8	127K97730	Scan Motor
*9	020E95980	Scan Output Drive Pulley
10	023E96110	Scan Output Drive Belt (106 MXL)
*11	020E95970	Scan Pulley/Gear
12	023E96120	Scan Input Drive Belt (118 MXL)



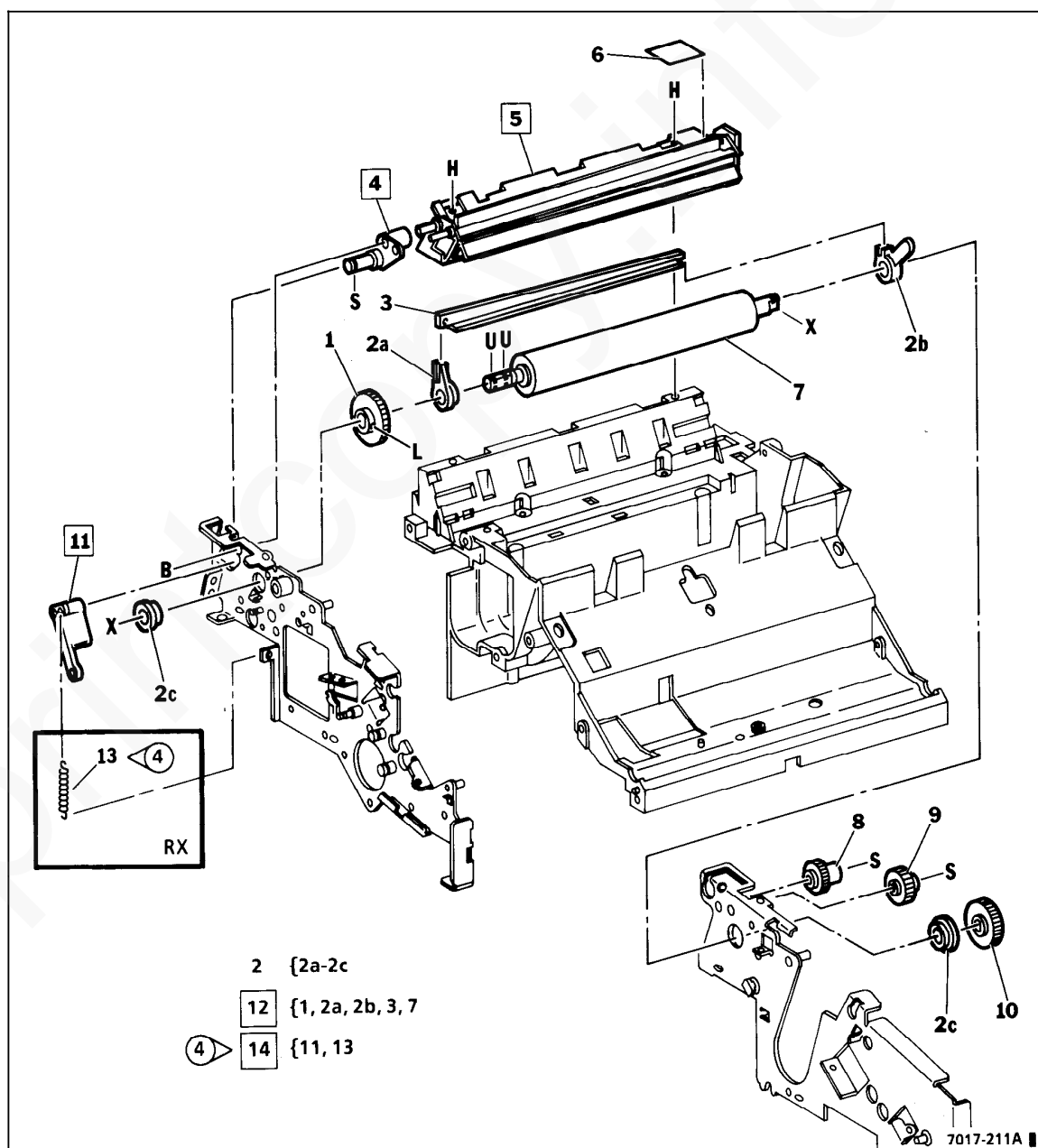
## PL 4.1 Upper Printer

Item	Part	Description
1	499K95663	Printer Bearing & Springs Kit (W/O Tag/MOD 3)
-	499K95753	Printer Bearing & Springs Kit (Tag/MOD 3)
1a	--	LH Printer Pivot Bearing
1b	--	LH Printer Pivot Spring
1c	--	LH Printer Cam Bearing
1d	--	RH Printer Pivot Bearing
1e	--	RH Printer Cam Bearing
1f	--	RH Printer Pivot Spring
2	--	J406 (P/O PL 5.5 Item 8)
3	--	Jam Sensor Bracket
4	130K96520	Printer Jam Sensor
*5	125E95151	Printer Static Eliminator
6	130P60798	Wide Paper Sensor (RX)
7	--	J409 (P/O PL 5.5 Item 18)
8	130P60798	Low Paper Sensor
9	--	J408 (P/O PL 5.5 Item 19)
10	--	Printer Pivot Shaft
*11	009E98920	Latch Spring
*12	011K95570	Printer Release Lever
*13	003K96110	Printer Latch
14	499K95611	Printer Output Idler Roller Kit
14a	--	Printer Output Idler Roller
15	110K95790	Printer Interlock Switch
16	--	Upper Printer Frame
17	--	Upper Printer Assembly



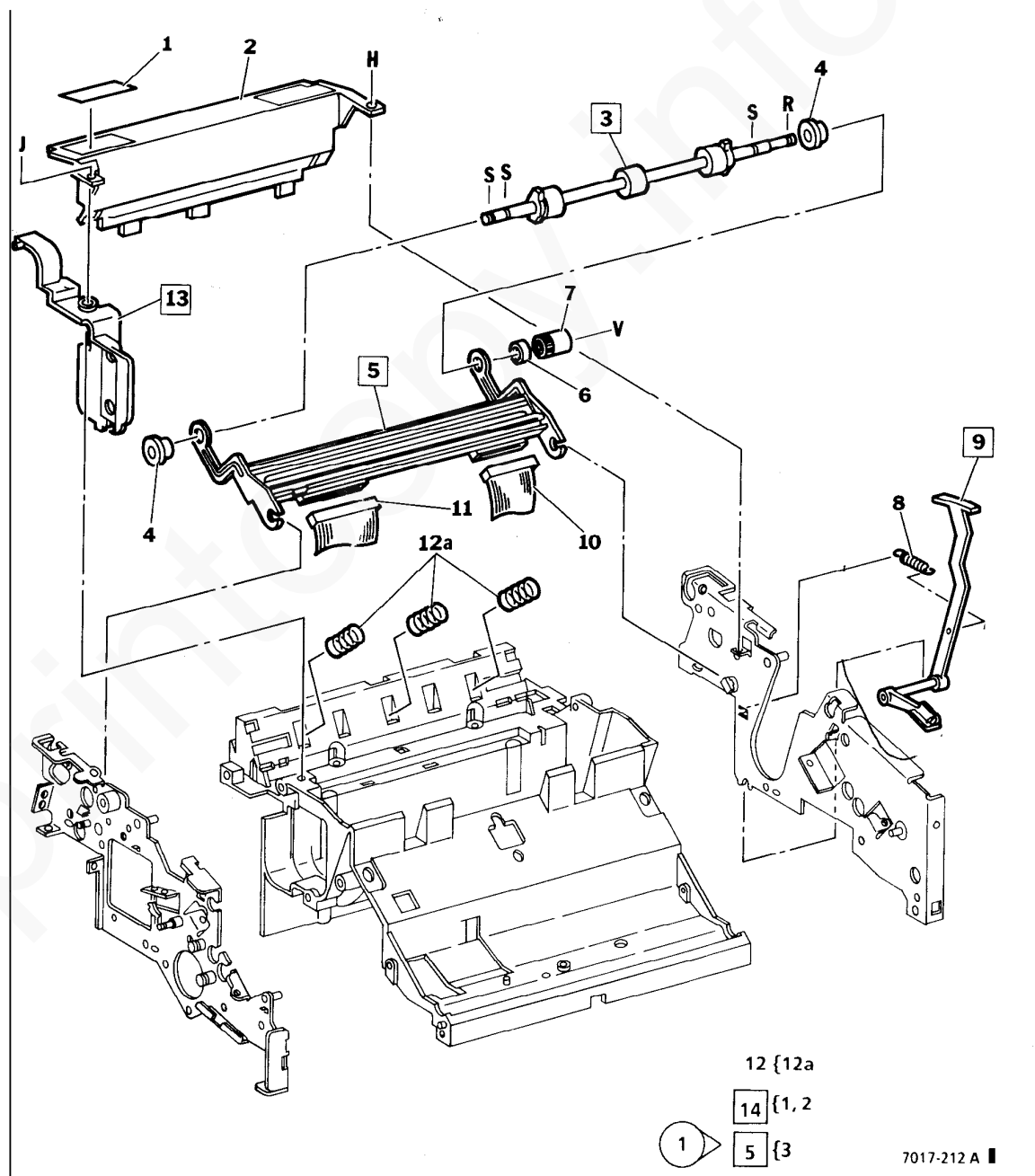
## PL 4.2Cutter and Pressure Roller

Item	Part	Description
*1	007E96841	Pressure Roller Drive Gear
2	499K95691	Pressure Roller Bearing Kit
2a	--	LH Pressure Roller Guide Bearing
2b	--	RH Pressure Roller Guide Bearing
2c	--	Pressure Roller Bearing
3	032E96102	Pressure Roller Guide
*4	015K97471	Cutter Cam
5	037K95153	Cutter
6	038E96960	Cutter Guide
7	022K99993	Pressure Roller
*8	007E96810	Printer Output Idler Gear #2
*9	007E96820	Printer Output Idler Gear #1
*10	007E96851	Printer Output Drive Gear
11	031E95700	Cutter Crank Arm (W/O Tag/MOD 4)
-	031E95701	Cutter Crank Arm (Tag/MOD 4) (USO)
-	--	Cutter Crank Arm (P/O Tag/MOD 4) (RX) (P/O Item 14)
12	--	Pressure Roller Assembly
13	--	Cutter Crank Arm Spring (P/O Tag/MOD 4) (RX) (P/O Item 14)
14	499K95853	Cutter Crank Arm Kit (Tag/MOD 4) (RX)



## PL 4.3 Thermal Head

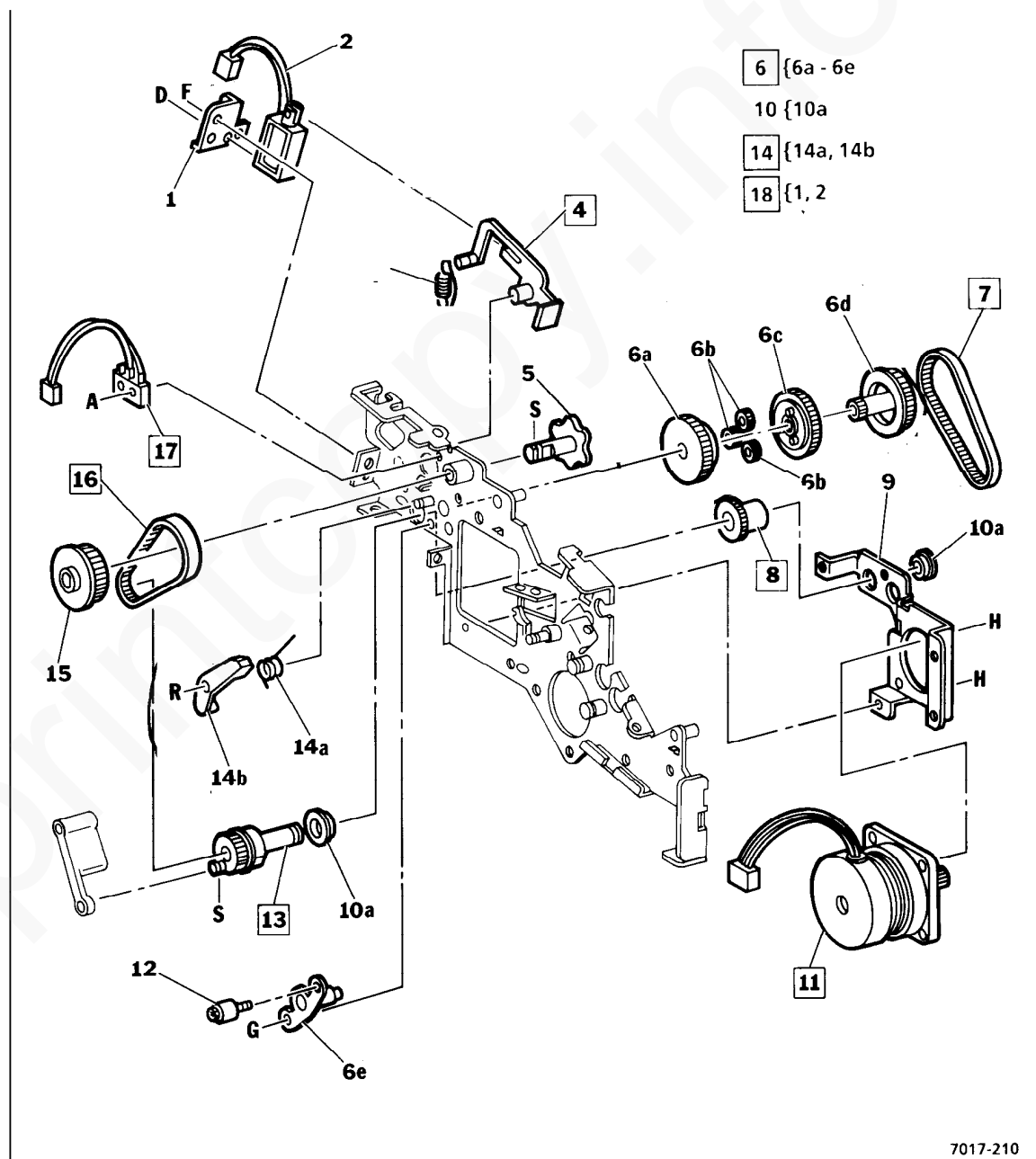
Item	Part	Description
1	091P66276	Paper Sensor Label
2	--	Lower Paper Guide
3	022K99981	Printer Output Drive Roller (W/O Tag/MOD 1)
-	022K86280	Printer Output Drive Roller (Tag/MOD 1)
4	013E96541	Printer Output Drive Bearing
5	499K95715	Thermal Head Assembly (with Thermal Head and Thermal Head Bracket) (W/O Tag/MOD 1) (USO)
-	499K95724	Thermal Head Assembly (with Thermal Head and Thermal Head Bracket) (Tag/MOD 1) (USO)
-	499K95716	Thermal Head Assembly (with Thermal Head and Thermal Head Bracket) (W/O Tag/MOD 1) (RX)
-	499K95725	Thermal Head Assembly (with Thermal Head and Thermal Head Bracket) (Tag/MOD 1) (RX)
6	014E96981	Printer Output Drive Spacer
7	007E96830	Printer Output Drive Clutch
8	009E85030	Indicator Spring
9	011K95490	Recording Paper Supply Indicator
10	--	J301 (P/O PL 5.5 Item 16)
11	--	J302 (P/O PL 5.5 Item 1)
12	499K95599	Thermal Head Spring Kit
12a	--	Thermal Head Spring
*13	038E96730	Printer Motor Cover
*14	038K96222	Lower Paper Guide Assembly (USO)
-	038K96401	Lower Paper Guide Assembly (RX)





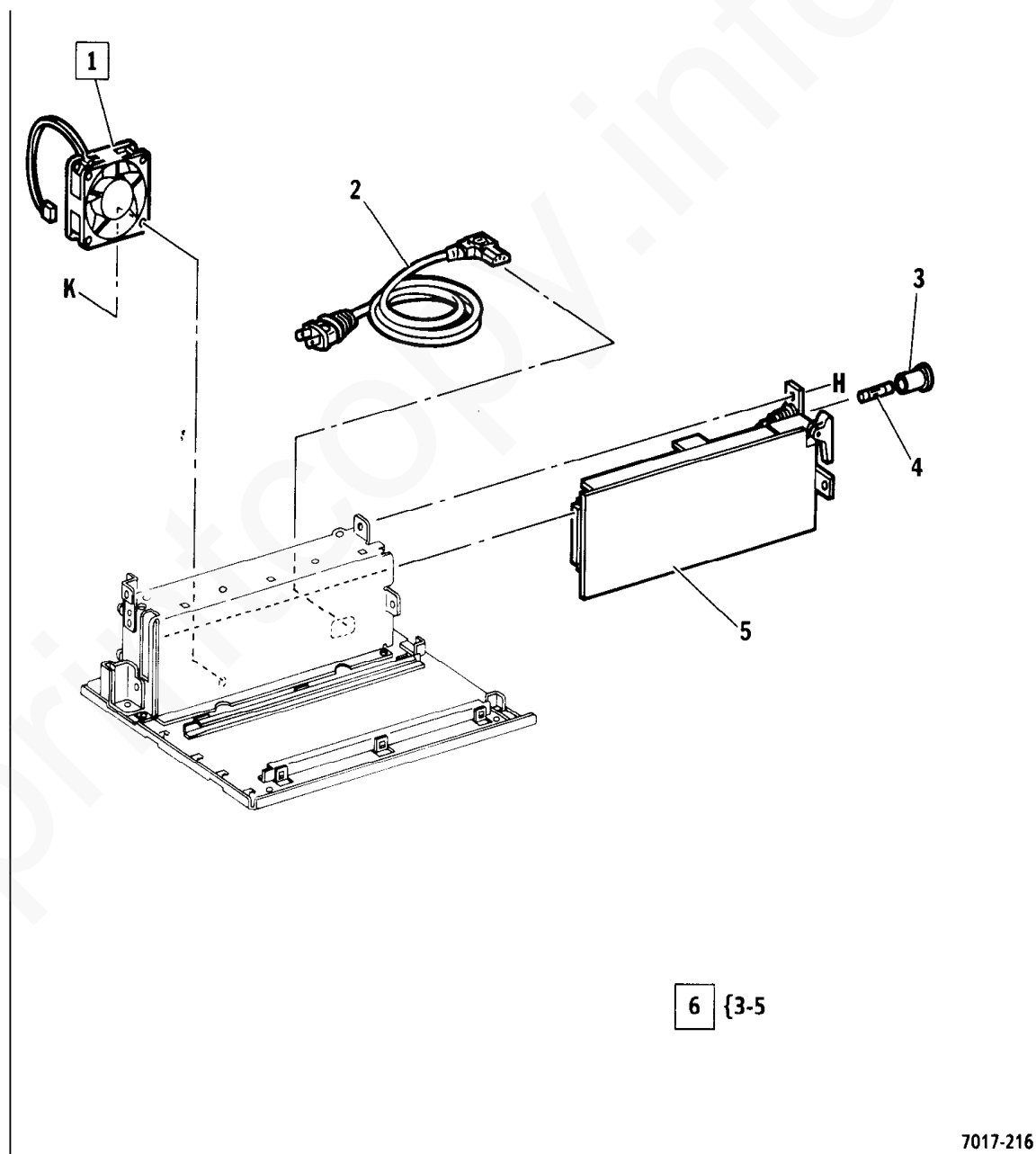
## PL 4.4Printer Drives

Item	Part	Description
1	--	Cutter Solenoid Bracket
2	--	Cutter Solenoid (with Cutter Solenoid Plunger)
3	009E98891	Cutter Solenoid Spring
*4	011K95631	Cutter Solenoid Lever
5	--	Cutter Thumbwheel
6	499K95754	Planetary Assembly Kit
6a	--	Planet Gear #1
6b	--	Planet Gear #2
6c	--	Planet Gear #3
6d	--	Planet Pulley
6e	--	Planet Bracket
7	023E96100	Printer Belt (90MXL)
8	007E96800	Cutter Clutch
9	--	Print Drive Bracket
10	499K95608	Cutter Crank Bearing Kit
10a	--	Cutter Crank Bearing
11	127K97730	Printer Motor
12	026E86240	Cutter Home Stop
*13	011K95660	Cutter Crank Pulley
14	499K95597	Cutter Home Lever Kit
14a	--	Cutter Home Spring
14b	--	Cutter Home Lever
*15	020E95950	Thumbwheel Pulley
16	023E96090	Cutter Belt (100 MXL)
17	110K95800	Cutter Switch
18	121K97052	Cutter Solenoid Assembly



## PL 5.1 Power Supply

Item	Part	Description
1	127E95590	Fan
2	117P80447	Power Cord (USO)
-	152S92956	Power Cord (RX: UK)
-	117P91798	Power Cord (RX: Australia, New Zealand)
-	152S92957	Power Cord (RX, except UK, Switzerland, Australia, and New Zealand)
-	152S92959	Power Cord (RX: Switzerland)
3	--	Fuse Cover
4	108E96020	Power Supply Fuse (6.3 AMP) (USO)
-	108E96030	Power Supply Fuse (3.15 AMP) (RX)
5	--	Power Supply
6	105K96211	Power Supply Assembly (USO)
-	105K96222	Power Supply Assembly (RX)

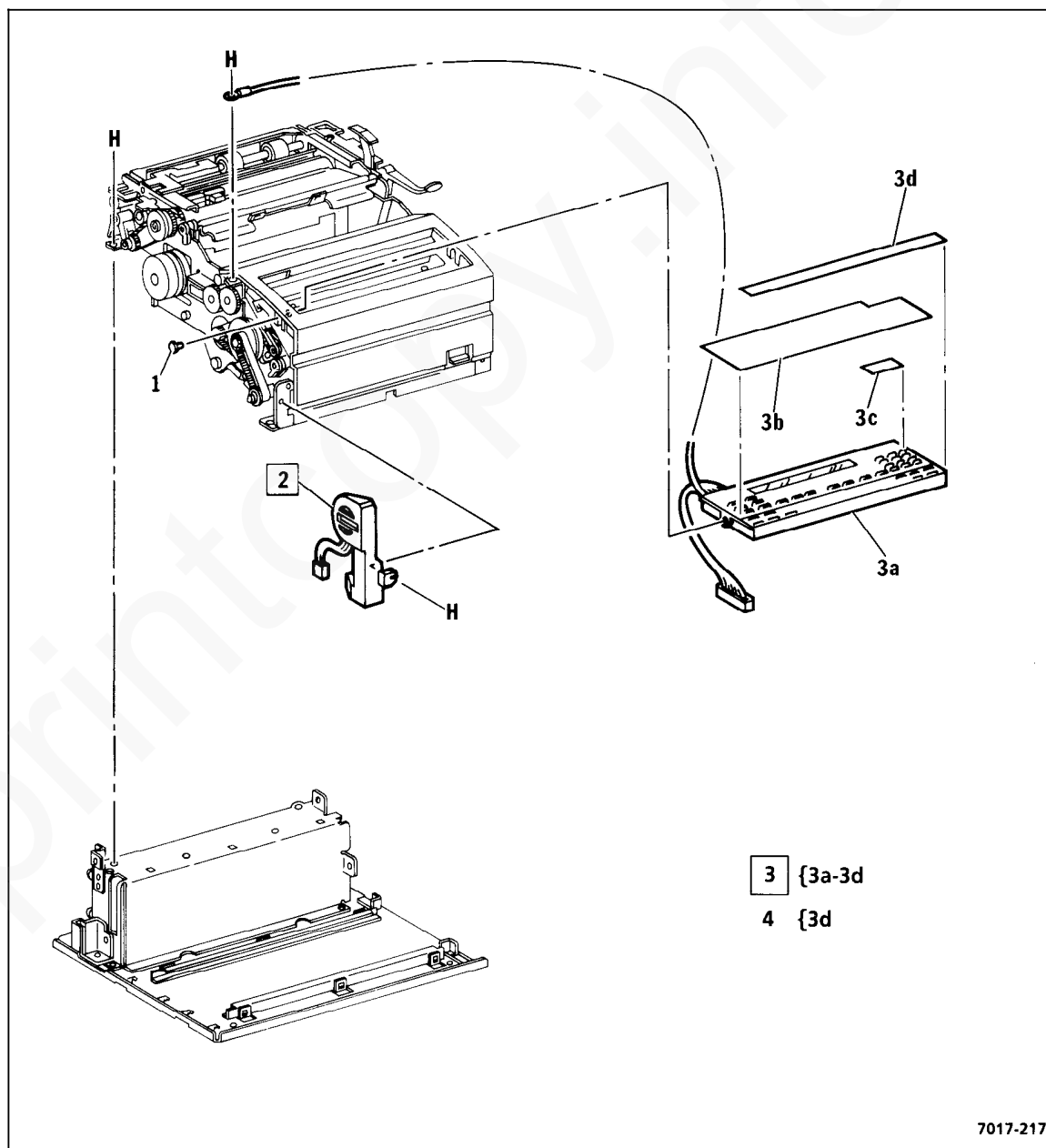


7017-216



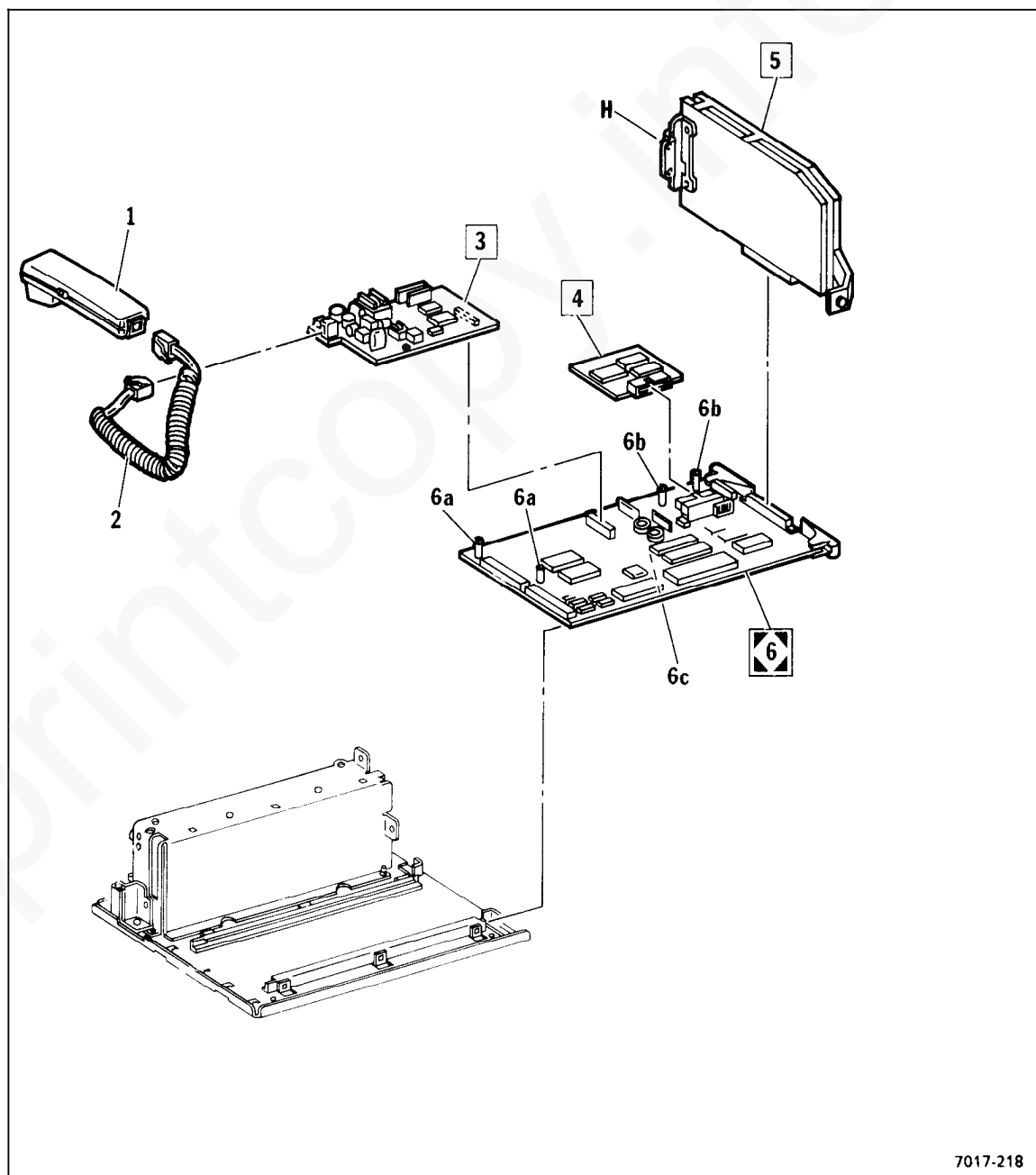
## PL 5.2 Control Panel and Speaker

Item	Part	Description
1	026E95240	Shoulder Screw
2	499K95617	Speaker Assembly (with Speaker and Speaker Support)
3	499K95703	Control Panel Assembly Kit
-	101K96840	Control Panel Assembly (OLV)
3a	--	A6 Control Panel (USO)
-	101K96340	A6 Control Panel (RX)
3b	--	Control Panel Overlay (USO)
-	091E89821	Control Panel Overlay (RX: English)
3c	--	7017 Overlay (USO)
-	--	7017SF Overlay (USO)
-	091E77000	7017 Overlay (RX)
-	091E77010	7017SF Overlay (RX)
3d	--	One Touch Overlay (USO)
-	091E89810	One Touch Overlay (RX)
4	--	Xerox Telecopier 7017 Job Card / Overlay Kit (Customer Supply Item)



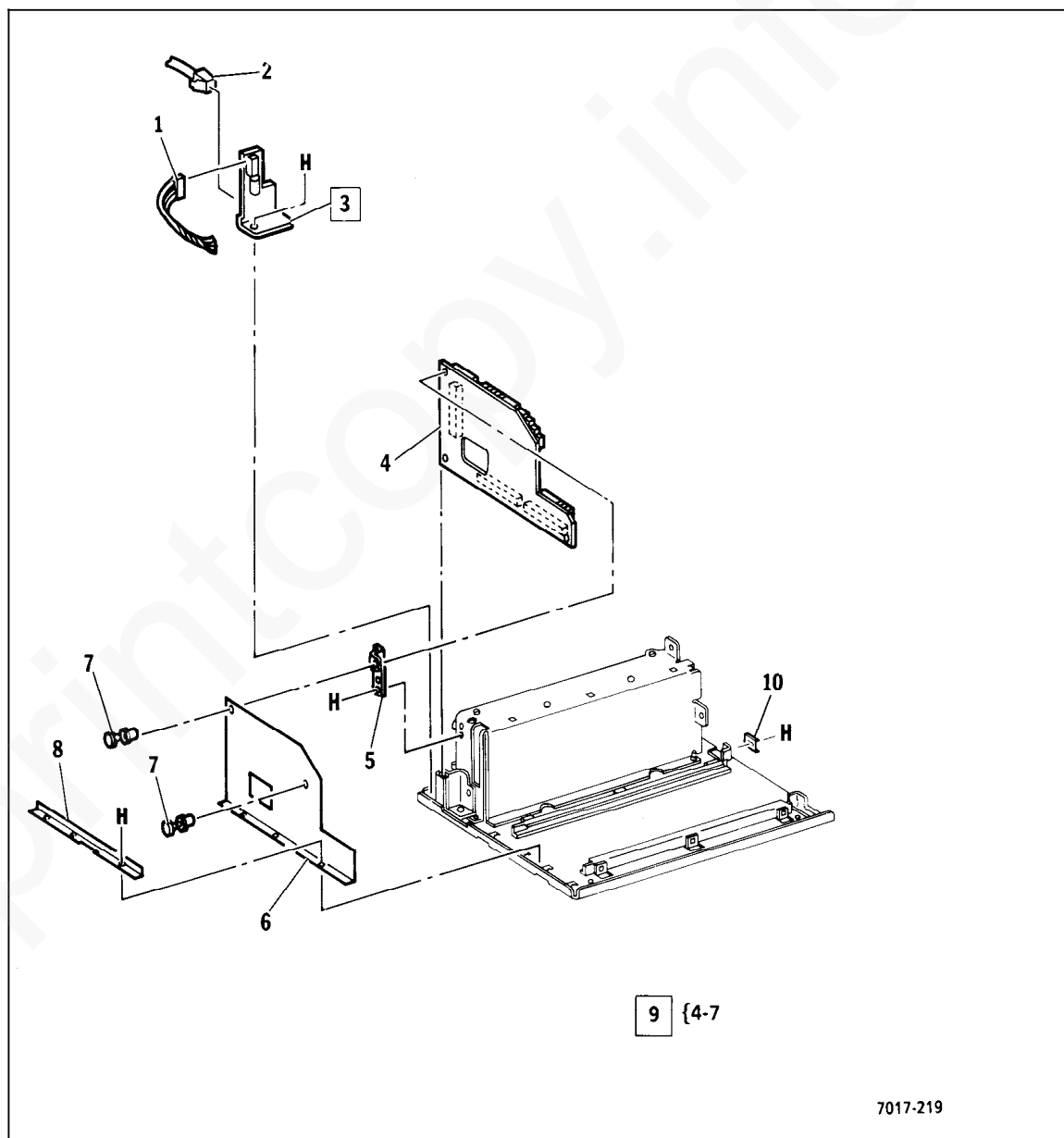
## PL 5.3PWBs and Handset

Item	Part	Description
1	499K95642	Handset (USO)
2	117E06270	Handset Cord (USO)
3	140K87946	A10 Coupler PWB (USO)
-	140K89910	A10 Coupler PWB (USO XCI)
-	140K87955	A10 Coupler PWB (RX)
4	140K96510	A5 Modem PWB
5	140K87882	A8 Store & Forward PWB (USO)
-	140K76690	A8 Store & Forward PWB (USO) (Alternate)
-	140K89261	A8 Store & Forward PWB (RX)
6	140K87878	A2 Main PWB (W/O Tag/MOD 2) (USO)
-	140K89940	A2 Main PWB (W/O Tag/MOD 2) (RX)
-	140K87879	A2 Main PWB (Tag/MOD 2) (USO, RX)
-	140K75480	A2 Main PWB (Tag/MOD 6) (USO, RX)
-	140K89941	A2 Main PWB (Tag/MOD 50) (RX)
-	140K75501	A2 Main PWB (Tag/MOD 6) (OLV)
6a	--	Coupler Standoff
6b	--	Modem Standoff
6c	--	Main Standoff



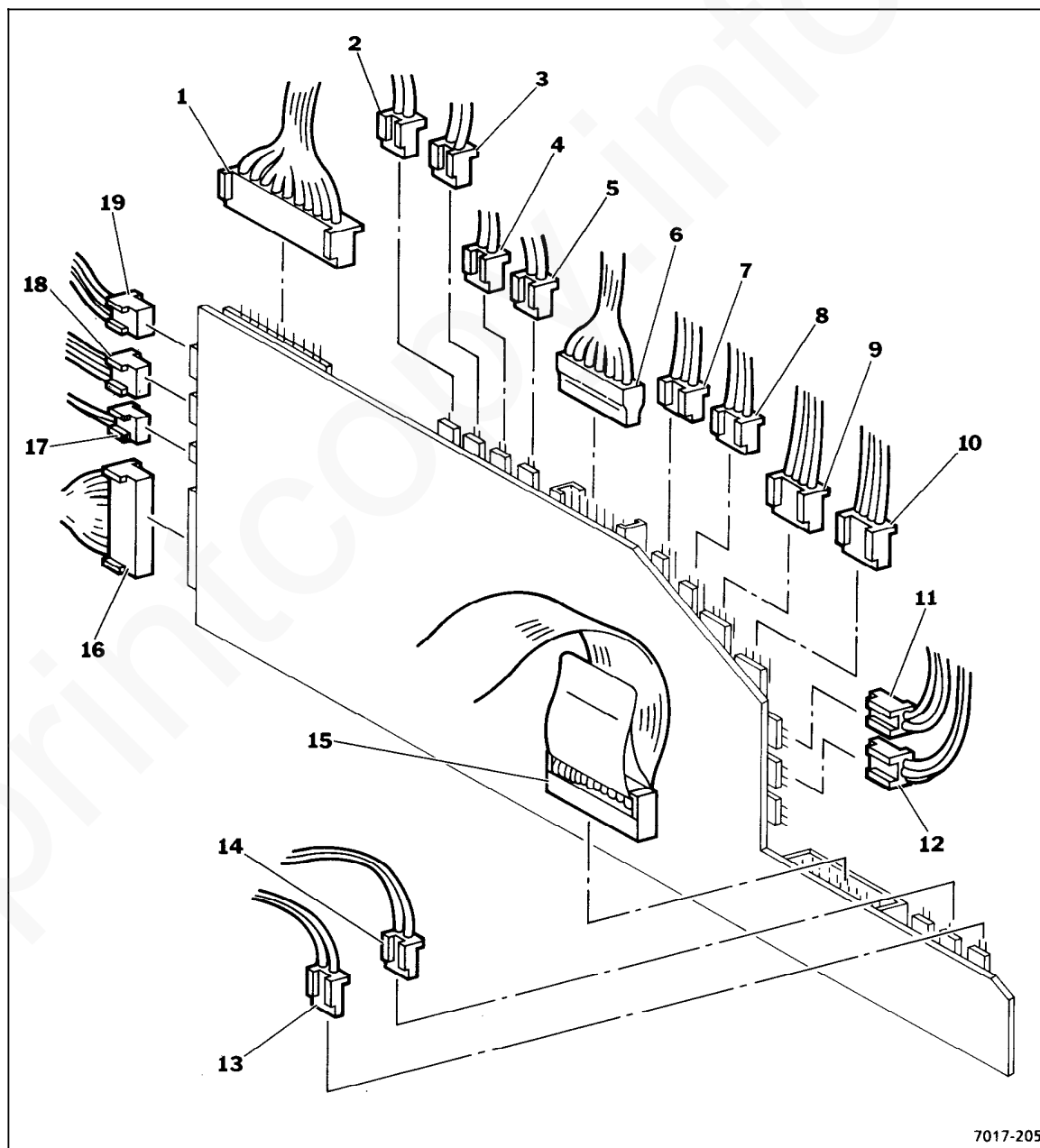
## PL 5.4CNC PWB and Line Filter

Item	Part	Description
*1	152K94820	W12 Wire Harness (with J701 and J901) (USO)
-	--	W13 Wire Harness (with J702 and J902) (RX)
2	117E06260	Telephone Line Cord (USO)
-	152P92551	Telephone Line Cord (with open ended leads) (RX)
-	152P92552	Telephone Line Cord (with spade terminals) (RX)
3	499K95629	Telephone Line Filter Assembly (with A3 Line Filter PWB and Line Filter Bracket) (USO)
-	499K95886	Telephone Line Filter Assembly (with A3 Line Filter PWB and Line Filter Bracket) (RX)
4	--	A0 CNC PWB
5	--	CNC Bracket
6	--	EME Shield
7	--	Fastener
8	--	EME Bracket
9	499K95615	CNC PWB Assembly
10	068E76140	PWB Retainer (USO)
-	--	PWB Retainer (RX) (P/O PL 1.2 Item 16)



## PL 5.5CNC Wire Harnesses

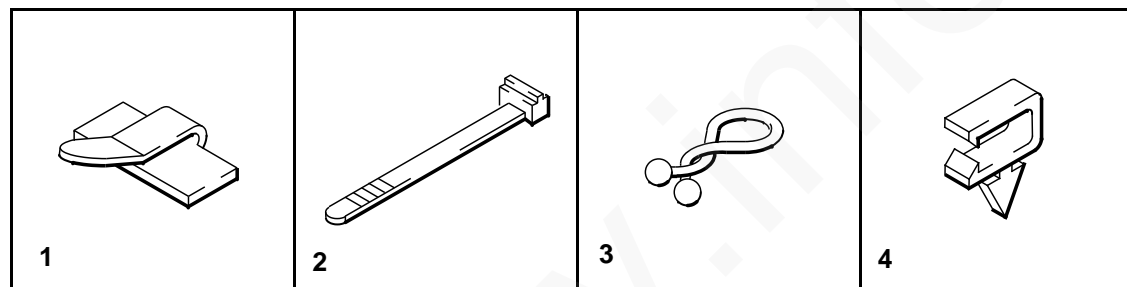
Item	Part	Description
*1	152K94801	W10 Wire Harness (with J121 and J302)
2	--	J118 (P/O PL 4.4 Item 2)
3	--	J109 (P/O PL 2.2 Item 23)
4	--	J113 (P/O PL 4.4 Item 17)
5	--	J112 (P/O PL 4.1 Item 15)
6	--	J111 (P/O PL 5.2 Item 3)
*7	152K94740	W4 Wire Harness (with J110 and J405)
*8	152K94760	W6 Wire Harness (with J114 and J406)
9	--	J115 (P/O PL 4.4 Item 11)
10	--	J104 (P/O PL 3.3 Item 8)
*11	152K94730	W3 Wire Harness (with J107 and J403)
*12	152K94720	W2 Wire Harness (with J106 and J402)
13	--	J101 (P/O PL 5.2 Item 2)
14	--	J103 (P/O PL 3.1 Item 10)
*15	152K94810	W11 Wire Harness (with J123 and J201)
*16	152K94791	W9 Wire Harness (with J120 and J301)
17	--	J119 (P/O PL 5.1 Item 1)
18	--	W8 Wire Harness (RX)
*19	152K94770	W7 Wire Harness (with J116 and J408)



7017-205

## PL 6.1 Electrical Connectors

Item	Part	Description
1	499K95638	Cable Clamp Kit (USO)
1a	--	Cable Clamp
2	600S00697	Cable Tie Kit
2a	--	Cable Tie
3	--	Twist Tie
		(use PL 6.1 Item 2 for replacement)
4	--	Cable Clamp
		(use PL 6.1 Item 1 for replacement)



7017-215

## Common Hardware

Item	Part	Description
A	026E85061	Screw M2X8
B	026E86120	Shoulder Screw M3
C	026E86210	Tapping Screw M3X8
D	026E95081	Screw M2.6X3
E	026P63376	Tapping Screw M3X8
F	113W27457	Hex Head Screw M3X4
G	113W27651	Screw M3X4
H	113W27657	Hex Head Screw M3X6
J	113W28057	Hex Head Screw M3X10
K	113W37457	Hex Head Screw M4X30
L	138W27650	Setscrew M3X6
M	252W31350	Nylon Washer
N	271W15650	Dowel Pin
P	354W15251	E-Ring #2
R	354W21251	E-Ring #3
S	354W24251	E-Ring #4
T	354W24254	KL-Ring #4
U	354W27251	E-Ring #6
V	--	Nylon Washer **
W	251W31151	Brass Washer (W/O Tag/MOD 3)
X	354W27254	KL-Ring
Y	252W31550	Black Washer (W/O Tag/MOD 3)
Z	--	Nylon Washer **

**\*\* NOTE:** *Mandatory if originally installed.  
Otherwise, none installed.*

## Part Number Index

<u>Part Number</u>	<u>PL Loc</u>	<u>Part Number</u>	<u>PL Loc</u>	<u>Part Number</u>	<u>PL Loc</u>	<u>Part Number</u>	<u>PL Loc</u>	<u>Part Number</u>	<u>PL Loc</u>
002E76431	1.2	011K95631	4.4	038E96960	4.2	127E95590	5.1	499K95601	2.1
002E88644	1.2	011K95660	4.4	038K96222	4.3	127K97730	3.3	499K95603	2.2
002E88663	1.2	013E96541	4.3	038K96243	1.2	127K97730	4.4	499K95604	3.2
002E88673	1.2	013E96640	3.2	038K96401	4.3	130K96520	4.1	499K95605	3.2
002E88693	1.2	014E96981	4.3	045E95741	1.1	130K96530	2.2	499K95606	3.1
002E88731	1.2	015K97471	4.2	048K95020	1.2	130K96540	3.1	499K95607	3.1
002E88741	1.2	020E95950	4.4	050E95812	1.2	130K96551	3.3	499K95608	4.4
002K75243	1.2	020E95970	3.3	068E76140	5.4	130P60798	4.1	499K95609	1.3
002K77021	1.2	020E95980	3.3	068E86002	1.2	140K75480	5.3	499K95610	3.3
002K79750	1.2	020E95990	3.2	068E87910	3.1	140K75501	5.3	499K95611	4.1
002K84571	1.1	022K85011	2.2	073K98032	1.1	140K76690	5.3	499K95613	2.1
003E98170	3.1	022K85030	3.3	073K98042	1.1	140K87878	5.3	499K95615	5.4
003E98240	3.1	022K85040	3.3	073K98671	1.1	140K87879	5.3	499K95617	5.2
003K96090	3.1	022K85051	3.2	091E77000	5.2	140K87882	5.3	499K95629	5.4
003K96110	4.1	022K85060	3.2	091E77010	5.2	140K87946	5.3	499K95638	6.1
005E96550	2.2	022K85070	3.2	091E77050	1.2	140K87955	5.3	499K95642	5.3
005K95600	2.2	022K86280	4.3	091E89810	5.2	140K89261	5.3	499K95648	2.2
006E99480	2.2	022K99981	4.3	091E89821	5.2	140K89910	5.3	499K95663	4.1
006E99490	2.2	022K99993	4.2	091P66276	4.3	140K89940	5.3	499K95691	4.2
006K95781	2.1	022P62530	2.2	091P66413	1.2	140K89941	5.3	499K95703	5.2
006K95821	2.2	023E96090	4.4	091P80361	1.3	140K96510	5.3	499K95715	4.3
007E96800	4.4	023E96100	4.4	101K96340	5.2	152K94720	5.5	499K95716	4.3
007E96810	4.2	023E96110	3.3	101K96840	5.2	152K94730	5.5	499K95724	4.3
007E96820	4.2	023E96120	3.3	105K96211	5.1	152K94740	5.5	499K95725	4.3
007E96830	4.3	023E96130	3.2	105K96222	5.1	152K94760	5.5	499K95727	2.2
007E96841	4.2	023E96320	2.2	108E96020	5.1	152K94770	5.5	499K95736	2.1
007E96851	4.2	026E86240	4.4	108E96030	5.1	152K94791	5.5	499K95753	4.1
007E96870	2.1	026E95240	5.2	110K95780	3.1	152K94801	5.5	499K95754	4.4
007E96881	2.2	031E95680	1.2	110K95790	4.1	152K94810	5.5	499K95853	4.2
009E85030	4.3	031E95700	4.2	110K95800	4.4	152K94820	5.4	499K95886	5.4
009E85170	1.1	031E95701	4.2	117E06260	5.4	152P92551	5.4	499K95949	1.2
009E98891	4.4	032E96041	1.3	117E06270	5.3	152P92552	5.4	600S00697	6.1
009E98920	3.1	032E96051	1.3	117P80447	5.1	152S92956	5.1		
009E98920	4.1	032E96102	4.2	117P91798	5.1	152S92957	5.1		
009E98941	2.1	037K95153	4.2	121E96121	2.2	152S92959	5.1		
009E99800	1.2	038E96730	4.3	121K97052	4.4	499K95597	4.4		
011K95490	4.3	038E96930	2.2	125E95151	4.1	499K95599	4.3		
011K95570	4.1	038E96950	2.2	125E95160	3.1	499K95600	2.2		

## 6. General Procedures / Information

- Introduction [6-2](#)

### Specifications and Space Requirements

- Product Code [6-3](#)
- Dimensions [6-3](#)
- Electrical Requirements [6-3](#)
- Power Consumption (maximum) [6-3](#)
- Meter Readings (USO) [6-3](#)
- Meter Readings (RX) [6-3](#)
- Environmental [6-3](#)
- Recording Paper [6-3](#)
- Figure 1 [6-4](#)

### Tools and Supplies [6-5](#)

### Telephone Requirements (USO) [6-6](#)

### Installation

- Checking the Installation Kit [6-7](#)
- RX: Checking Individual Country [6-7](#)
- Installation Kit (locally sourced) [6-7](#)
- Unpacking the Terminal [6-7](#)
- Install the Customer Assistance Label [6-7](#)
- Install the Output Tray [6-8](#)
- Install the Document Catch Tray [6-8](#)
- Install the Paper Roll [6-8](#)
- Install the Telephone Handset [6-9](#)
- RX: Install Telephone Handset (if required) [6-9](#)
- Install the Telephone Number Label [6-9](#)
- Install the Store and Forward Option [6-9](#)
- Install the Power Cord [6-9](#)
- Entering the Date and Time [6-10](#)
- Entering Local ID Number [6-11](#)
- Checking Time Digits [6-11](#)
- Checking Copy Operation [6-11](#)



- Checking Diagnostics Operation [6-12](#)
- RX: Remote Diagnostic Setup [6-12](#)
- A10 Setup for USO, XCI, and RX [6-13](#)
- RX: Service (PSR) Mode [6-13](#)
- RX: Remove Diagnostic Mode [6-13](#)

## **Remote Diagnostic USO, XCI, RX [6-20](#)**

### **System Data Setup [6-21](#)**

- Setting System Data Parameters [6-21](#)
- System Data Tables [6-22](#)

### **Change Tag / MOD Index [6-39](#)**

- USO: Tag / MOD Classification [6-39](#)
- RX: Tag / MOD Classification [6-39](#)
- Change Tag / MOD Table [6-39](#)
- Firmware Matrix [6-40](#)

### **System Tests and Information**

- Service Mode [6-41](#)
- Service Mode Options Report [6-41](#)
- Diagnostics [6-41](#)
- Electrostatic Discharge Precautions [6-41](#)
- Test Group B, Pattern Prints [6-42](#)
- Test Group B, Protocol Monitor Print [6-42](#)
- Test Group B, Record Paper Feed Test [6-43](#)
- Test Group B, Original Feed Test [6-43](#)
- Test Group B, Printer Motor Test [6-43](#)
- Test Group B, Scanner Motor Test [6-44](#)
- Test Group B, LED Array Test [6-44](#)
- Test Group B, Sensor Test [6-44](#)
- Test Group B, Frequency Test [6-45](#)
- Test Group B, Touch Tone Test [6-45](#)
- Test Group C, System Data Setup [6-45](#)
- Test Group C, RAM Clear [6-46](#)
- Test Group C, Counters Reset [6-46](#)
- Test Group C, Service Diagnostics [6-47](#)

## 6. General Procedures / Information

- Special Facility Menu, G3 Send Speed [6-48](#)
- Special Facility Menu, G3 Rec Speed [6-48](#)
- Special Facility Menu, Comm Mode [6-48](#)
- Special Facility Menu, Protocol Monitor [6-49](#)

## **Glossary of Mnemonics** [6-50](#)

## Introduction

The following is a description of the information contained within this section of the Service Manual.

The Tools and Supplies subsection contains a listing of the required tools and supplies you will need to properly repair and maintain the terminal.

When a problem exists in a terminal that could be caused by conditions outside of the defined specifications, refer to Specifications and Space Requirements. If the problem is a result of space, electrical, or environmental problems, call for assistance.

This Section contains requirements for telephones and interconnections. Refer to Telephone Requirements whenever the problem is a result of the telephone or telephone connections.

The Installation subsection will direct you through the procedures required to install and verify basic operation of the terminal.

System data setup includes software switches that can be set to enable or disable parameters that control the terminal.

As changes in configuration are made to the terminal, they are assigned a Tag/MOD number. Information about a specific modification can be found in the Change Tag Index Table.

System tests and general information can be found in "System Test and information," this section of the manual contains all the test procedures contained in the terminals software and general procedures.

A glossary of mnemonics has been added to the end of this section

## Specifications and Space Requirements

### Product Code

49K      Telecopier 7017      (USO)

59T      Telecopier 7017      (RX)

### Dimensions

Height    12.5"

Width     20"

Depth    24"

Weight    46.3lbs (21kg) packed

33.0lbs (15kg) Unpacked

Minimum space requirements are needed for normal operator and service maintenance functions. The terminal should be placed on a sturdy, flat surface within 5 feet (1.5 metres) of a telephone outlet and within 5 feet (1.5 metres) of a grounded electrical outlet. Clearance should be maintained above the unit so the covers can be opened. The terminal should not be contained within any type of enclosure.

The terminal is considered movable if proper telephone interface is available.

### Electrical Requirements

Single phase (2 wires plus ground)

Voltage:

**USO**      104 to 127 VAC (nominal 115 VAC)  
             @ 50 Hz  $\pm$  1 Hz or 60 Hz  $\pm$  1 Hz

**RX**        200 to 240 VAC (nominal 220 VAC)  
             @ 50 Hz  $\pm$  1 Hz or 60 Hz  $\pm$  1 Hz

### Power Consumption (maximum)

Operating    300 W

Standby     15 W

A standard two pole, three wire grounded receptacle is required.

### Meter Readings (USO)

Between AC Hot and Neutral 104 to 127 VAC

Between Gnd and AC Hot    104 to 127 VAC

Between Gnd and Neutral (longer slot) less than 3 VAC

### Meter Readings (RX)

Between AC Live and Neutral 200 to 240 VAC.

### Environmental

Temperature      60°F to 90°F (15°C to 32°C)

Humidity          15% to 85% w/o condensation

Elevation        Maximum 9,900 feet (3,000 metres) above sea level

Heat Dissipation    Operating 887 BTU/hour  
                         Standby 51 BTU/hour

### Recording Paper

Thermal sensitive paper 100 meter roll.

### Original Stacking Requirements

Originals are loaded into the ADF face down and lead edge to the front. They are aligned by adjusting the document guides to the width of the originals.

Originals loaded in the ADF may be mixed in weight and length, but should not be mixed in width.

Weight    13 to 36 pound

(45 to 128 grams/ square meter)

Width     5.6 to 11 inches

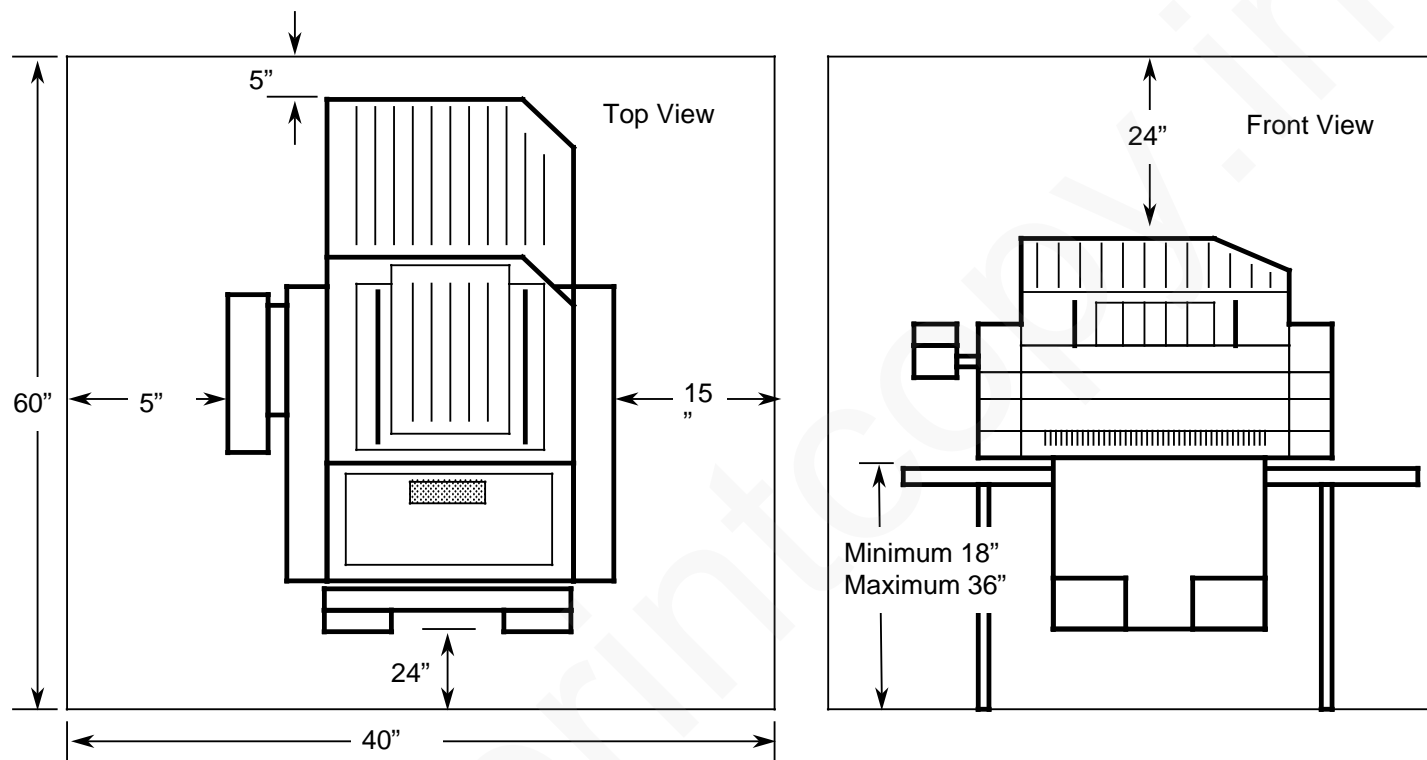
(148 to 285 mm)

Length    4.5 to 16.5 inches (110 to 420 mm)

*Note: Originals longer than 18 inches (420 mm) can be used if you select the long original feature and manually assist the ADF feeding.*

The input tray (ADF) capacity depends on the size and weight of the paper.

- Less than 32lb. originals - 30 documents letter or 20 documents legal.
- 32lb. to 36lb originals - 20 documents letter or legal.
- Mixed weights - 30 documents letter if no more than 4 originals are 32 lb. and 36 lb.
- Documents smaller than 8.66 inches (220mm) will not be detected as wide originals.



7017-300

Figure 1. Specification and Space Requirements

## Tools and Supplies

Part No.	Description	Part No.	Description
8R33	Skip tone pads, 2/bag; 25 Bags/pack	600T40901	Long nose pliers
8R90019	Paper towels (RX Only)	600T40903	Diagonal cutters
8R90020	Film remover (RX Only)	600T40906	Crimping pliers
8R90034	Belt cleaner (RX Only)	600T40907	Wire strippers
35P3191	Heavy duty towel (USO Only)	600T41102	Hex key, 2.0mm
43H12	Lens and Mirror Cleaner (USO Only)	600T41107	Hex key, 1.5mm
43P45	Film remover, 8-OZ can (USO Only)	600T41502	Rule, 6-Inch
43P48	Formula "A" cleaner, 8-OZ	600T41602	Jumper 12"
43P58	Hand cleaner (USO Only)	600T41801	Round file, 6-Inch
43P67	CLEAN-UPS; 5 X 8 Inch paper towel	600T41802	Flat file, 6-Inch
43P73	2 Part epoxy (USO Only)	600T41901	Brush
70P87	Lubricant	600T41903	Scribe
82P151	Test pattern (XTP327.000)	600T41906	Spring hook
600S697	Small cable ties (kit)	600T41909	Magnet pickup
601S746	Typewriter platen cleaner (USO Only)	600T41910	Inspection mirror
601S832	Common hardware kit	600T90318	Lens cleaner (RX Only)
600S4372	Cleaning pads, 5/Pack; 10 X 17 Inch.	600T90356	Antistatic cleaner (RX Only)
600T24	Shim Stock		
600T0785	Flashlight		
600T1043	Phillips Screw Starter		
600T1121	"E" Ring puller/applicator		
600T1502	4 "X-Point #1 Blade		
600T1616	Digital volt meter		
600T1617	DVM Leads kit		
600T40201	Screwdriver 4" X 1/4"		
600T40206	Phillips pocket screwdriver		
600T40207	Jewelers Screw Driver		
600T40212	Xcelite handle		
600T40502	Combination wrench, 7.0 mm		
600T40702	Socket, 7.0mm (1/4 Inch drive)		

## Telephone Requirements (USO)

### Internal Coupler Requirements

This terminal interfaces with the telecommunications network through an FCC (Federal Communications Commission) approved (registered) data coupler.

The internal registered Data Coupler is of the permissive mode configuration (maximum transmit power to -9dbm) and can be connected to all types of switched (Dial-Up) Telecommunications Networks (D.D.D., PBX, Key systems, On-Site, Centrex, etc.).

The terminal interfaces to the telephone network through a modular 6 position, 4 pin jack (USOC RJ11C) supplied by the telephone company.

FCC Registration Number

AQX63C-19885-DP-R

Ringer Equivalence = 0.5 B

Application up to 9600 BPS Facsimile

Telephone may be rotary, Touch-Tone®, or pulse Dial.

## Installation

### Checking the Installation Kit

1. Unpack the container.
  - a. If ordered, remove the 7017SF conversion kit box. Set it aside.
  - b. Remove the top cardboard spacer.
  - c. Remove the box.
  - d. Remove the recording paper and handset from slots in the foam spacer.
  - e. Verify that the following contents are included in the box:
    - Power Cord
    - Telephone Line Cord
    - Job Cards (1 Set of 15 cards)
    - Xerox CLEAN-UPS
    - Customer Assistance Label
    - Document Catch Tray
    - Output Tray
    - Operator Guide
    - Operator Manual
    - Telephone handset
    - Telephone number label

### RX (Only)

1. Verify that the following contents are included in the carton:
  - 7017 Terminal
  - 7017 SF conversion kit box, if ordered.
  - Output Tray
  - Document Catch Tray
  - A4 Recording paper
  - 1-A4 Document carrier
  - 1-B4 Document carrier
  - 2 sets of Job Cards 1 for A4 and 1 for B4 (15 cards each set)
  - Operator Guide
  - Control Panel overlay in English
  - 2 - Product identification Labels (7017 Label and 7017 SF label).

### RX (Only) Checking Individual Country Installation Kit (locally sourced)

- Telephone Line Cord
- Power Cord
- Log Book
- Operator Manual
- Control Panel overlay (translated)
- PTT labels
- Other Item required by Country

### Unpacking the Terminal

1. Remove the styrofoam packaging from the top of the terminal

#### CAUTION

*Do not lift the terminal by the telephone cradle; It will not safely support the weight of the terminal.*

2. Position the terminal
  - a. Remove the terminal from the carton by grasping the bottom of the terminal with both hands and lifting.
  - b. Position the terminal at the site selected by the customer.
3. Prepare the terminal
  - a. Remove the plastic cover from the terminal.
  - b. Remove all tape and the cardboard shield from the terminal.
  - c. Remove the 3 pieces of protective plastic film from the control panel.

### Install the Customer Assistance label

1. Locate the customer assistance label.

Record the following information on the customer assistance label:

- Serial number.
- Customer assistance telephone number.

2. Locate the Serial Number Plate.

- a. Raise the upper scan cover until it is completely open.
- b. Locate the Serial Number Plate on the inside of the right hand frame.

3. Record the serial number.

- a. On the bottom line of the customer assistance label, with a pen, record the serial number .
- b. Record the serial number in the "Operator Manual" on the page titled "Requesting assistance."

4. Record customer assistance telephone number on the customer assistance label.

- a. On the top line of the label, with a pen, record the customer assistance telephone number listed below:

1+(800) 527-0214

5. Close the upper scan cover and press firmly to latch.

6. Install the customer assistance label.

- a. Remove the protective cover backing and **carefully** position the cover over the label.
- b. Place the label on top front of left cover or on the cradle.

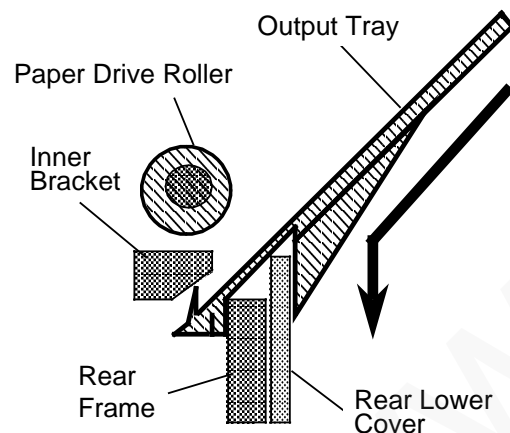
### RX (Only)

Record all necessary details required by your organization.



## Install the Output Tray

1. Locate the output tray.
2. Position the output tray
  - a. Observe the ridge and the built-in support bracket on the bottom of the output tray.  
  
The ridges on the output tray will hook over the rear frame and the tray support will rest on the back cover.
2. Install the output tray
  - a. Slide the lead edge of tray into the opening at the rear of the terminal.
  - b. Tilt the top of the tray towards the front of the terminal.
  - c. Holding the tray tilted up, push the lead edge between the inner bracket and the rear frame.
  - d. Gently press down on the tray to allow the ridge to fit under the inner bracket. The tray support should touch the rear cover.



Side View of Rear  
(Tray Installed)

## Install the Document Catch Tray

1. Position the terminal on the table so that the front of the terminal extends over the edge of the table approximately 1 and 1/2 inches.
2. Position the document catch tray
  - a. Locate the document catch tray.
  - b. Observe the tabs on the top, back edge of the tray, these tabs fit into slots.
  - c. Locate the slots under the front of the terminal.
2. Install the tray document catch
  - a. Position the tabs on the tray to align with the slots in the terminal.
  - b. Gently slide the tabs into these slots.
  - c. Push in until the tray snaps into place.
  - d. Pull the front of the catch tray to its fully extended position.

## Install the Paper Roll

1. Locate the recording paper.
  2. Prepare the paper.
    - a. Remove the plastic from the roll of paper.
- Note: An instruction label is provided under the printer cover to aid in the installation of the recording paper.*
3. Install paper.
    - a. Lift the printer cover release lever and raise the cover.
    - b. Position the paper with the lead edge looped over the top and pointing toward the rear of the terminal.
    - c. Place the paper between the two side plates with the lead edge over the top of the lower paper guide.
    - d. Place the lead edge under the printer pressure roller.
    - e. Move the paper toward the rear until it is visible beyond the pressure roller.
    - f. Close the printer cover.

## Install the Telephone Handset

1. Locate the telephone handset.
2. Install the telephone handset.
  - b. Locate the modular jack on the lower left side of the Terminal.
  - c. Insert the end of the telephone handset cord into the modular jack.
  - d. Place the handset on the cradle.
3. Locate the telephone line cord.
4. Install the telephone line cord.
  - b. Locate the modular jack at the lower left rear of the Terminal.
  - c. Insert one end of the telephone line cord into this modular jack.
  - d. Insert the other end into the modular jack at the telephone wall jack.
5. Verify telephone operation.
  - a. Lift handset and listen for a dial tone.
  - b. If no dial tone is heard, check the connections. If checking the connections does not resolve the problem, refer to Service Call Procedures.
  - c. Place the handset on the cradle.

## RX: Install Telephone Handset (if required)

1. Locate Customer handset.
2. Ensure appropriate connectors are fitted to handset.
3. Locate the telephone line cord.
4. Install the telephone line cord.
  - a. Connect telephone line cord to L1 and L2 on A10 Coupler.
  - b. Connect handset to T1 and T2 on A2 Coupler.

## Install the Telephone Number Label

1. Install the telephone number label.
  - a. Locate the telephone number label.
  - b. Record the telephone number of the Terminal on this label.
  - c. Remove the backing from the protective cover.
  - d. Carefully place the protective cover on the label.
  - e. Remove the backing from the label.
  - f. Locate the notch in the cradle.
  - g. Place the label in the notch.

## Install the Store and Forward Option

1. Install the Store and Forward Option if ordered.
  - a. Remove the Store and Forward Option from the box.
  - b. Remove the Right Hand Cover.
  - c. Position P6 Store and Forward Option above J6 on the A2 Main and push into position.
  - d. Secure the Store and Forward Option to the front and rear frames.
  - e. Replace Right Hand Cover.

## Install the Power Cord

1. Install the power cord.
  - a. Locate the power cord.
  - b. Plug one end of the power cord into the receptacle at the rear of the terminal.
  - c. Plug the other end of the power cord into the electrical wall outlet.
2. Verify power.

The display will momentarily indicate:

**PLEASE WAIT**

**Telecopier 7017**

and various LED's on the control panel will light.

## Entering the Date and Time

### 1. Select "32 Date and time"

- Press the Menu key.
- Press the 3 key on the keypad, then the 2 key.

The display will indicate:

```
32    DATE AND TIME
      PRESS [ENTER] OR [SCROLL]
```

- Press the Enter key

The display will indicate:

```
32    DATE AND TIME  >12 HOUR
      PRESS [SELECT]TO CHANGE THEN [ENTER]
```

### 2. Select the clock option

- Press the Select key to select either the 12 hour or the 24 hour clock.
- Press the Enter key to store your selection.

The display will indicate:

```
32    ENTER DATE THEN TIME
      01-01-88      02:36PM
```

### 3. Enter the date and time

*Note: Observe the cursor beneath the first digit of the data field. It will always indicate the character block to be entered. If you make an error while entering digits, press the Clear key and enter the correct digits.*

- Enter two digits for the month. (For example, enter 02 for February.)

The display will indicate:

```
32    ENTER DATE THEN TIME
      02-01-88      02:36PM
```

- Press the Enter key to store the entry.
- Enter two digits for the day. (For example, enter 26 for the day of the month.)
- Press the Enter key to store the entry.
- Enter two digits for the year. (For example, enter 88 for 1988.)

The display will indicate :

```
32    ENTER DATE THEN TIME
      02-26-88      02:36PM
```

- Press the Enter key to store the entry.

The display will indicate :

```
32    ENTER DATE THEN TIME
12 HOUR  02-26-88      02:36PM
```

where 12 hour indicates the clock option.

- Enter two digits for the hour. (For example, enter 10.)
- Press the Enter key to store the entry.
- Enter two digits for the minutes. (For example, enter 45.)

The display will indicate:

```
32    ENTER DATE THEN TIME
12 HOUR  02-26-88      10:45PM
```

- Press the Enter key to store the entry.

If the 24 hour clock was selected, you have completed this procedure. The display will indicate the idle mode.

If the 12 hour clock was selected, the display will indicate:

```
32    ENTER DATE THEN TIME  >PM
      PRESS [SELECT]TO CHANGE THEN [ENTER]
```

- Press the select key to select either AM or PM.

- Press the Enter key to store your selection.

The display will indicate an idle mode.



## Checking Diagnostics Operation

1. Select "24 Diagnostics"
  - a. Press the **Menu** key.
  - b. Press the **2** key, then the **4** key.

The display will indicate:

24	DIAGNOSTICS PRESS [START] OR [SCROLL]
----	--

2. Press the Start key

The display will show various testing functions and illuminate each of the control panel indicators.

3. If an error code is displayed, restart diagnostics
  - a. Record the error code.
  - b. Press the **Start** key again to continue the diagnostics.

The terminal will print a test pattern towards the end of diagnostics. When diagnostics is complete, the display will momentarily indicate:

24	DIAGNOSTICS COMPLETE
----	-------------------------

4. Evaluate the diagnostic operation
  - a. If an error code was displayed during diagnostics, refer to level 1.
  - b. Compare the printout with the sample in the "Copy Quality" section.
  - c. If the test pattern compares, the printer electronics are functioning correctly.
  - d. If the comparison does not agree, refer to level 1.

## RX (Only) Remote Diagnostics Setup

Include remote diagnostics setup in installation procedure (see Remote Diagnostics for RX).

## A10 Setup for USO, XCI and RX

The configuration switch(es) on the A10 Autodialer/Data Coupler PWB control(s) how the terminal will respond to the customer's specific telephone equipment.

### USO:

1. No specific requirements (see Note, Table 1).

### XCI:

1. No specific requirements (see Note, Table 1).

### RX:

1. Position Shorting Links.
  - a. Certain links depend upon local installation conditions. Refer to Table 2, for explanation. Move shorting links on the A10 Coupler PWB. Refer to Figure 1.
2. Connect data cable to the A10 Coupler PWB and telephone network. Refer to Figure 1.
3. To set transmission level, refer to Tables 2, 2A, 4, and 4A.

## RX: Service (PSR) Mode

The A10 Coupler PWB incorporates Coupler Switch SW 1. This switch contains the following bit switches (see Figure 1):

- A10 SW 1 Bit 1 - Conf. 1 (Table 3A).
- A10 SW 1 Bit 2 - Conf. 0 (Table 3A).
- A10 SW 1 Bit 3 Remote Diagnostics (Table 3B).
- A10 SW 1 Bit 4 Service (PSR) Mode (Table 3B).

1. To Enable Service Mode:
  - a. Remove power cord.
  - b. Remove the coupler cover.
  - c. Position A10 SW 1 bit 4 to the "ON" position.
  - d. Reinstall power cord.
  - e. Top line of display blinks to indicate terminal is in service mode.
2. To Disable Service (PSR) Mode:
  - a. Remove power cord.
  - b. Position A10 SW 1 bit 4 to the "OFF" position.
  - c. Reinstall the coupler cover.
  - d. Reinstall power cord.
  - e. Top line of display remains steady indicating Service (PSR) Mode is disabled.

## RX: Remote Diagnostic Mode

The A10 Coupler PWB incorporates Coupler Switch SW 1. This switch contains the following bit switches (see Figure 1):

- A10 SW 1 Bit 1 - Conf. 1 (Table 3A).
- A10 SW 1 Bit 2 - Conf. 0 (Table 3A).
- A10 SW 1 Bit 3 Remote Diagnostics (Table 3B).
- A10 SW 1 Bit 4 Service (PSR) Mode (Table 3B).

1. To Enable Remote Diagnostic Mode:
  - a. Remove power cord.
  - b. Remove the coupler cover.
  - c. Position A10 SW 1 bit 3 to the "ON" position.
  - d. Reinstall the coupler cover.
  - e. Reinstall power cord.
  - f. Select Menu 53. Display indicates:

53	REMOTE DIAGNOSTICS PRESS (ENTER) OR (SCROLL)
----	---

2. To Disable Remote Diagnostics Mode:
  - a. Remove power cord.
  - b. Remove the coupler cover.
  - c. Position A10 SW 1 bit 3 to the "OFF" position.
  - d. Reinstall the coupler cover.
  - e. Reinstall power cord.
  - f. Select Menu 53. Display indicates:

53	NOT AVAILABLE
----	---------------

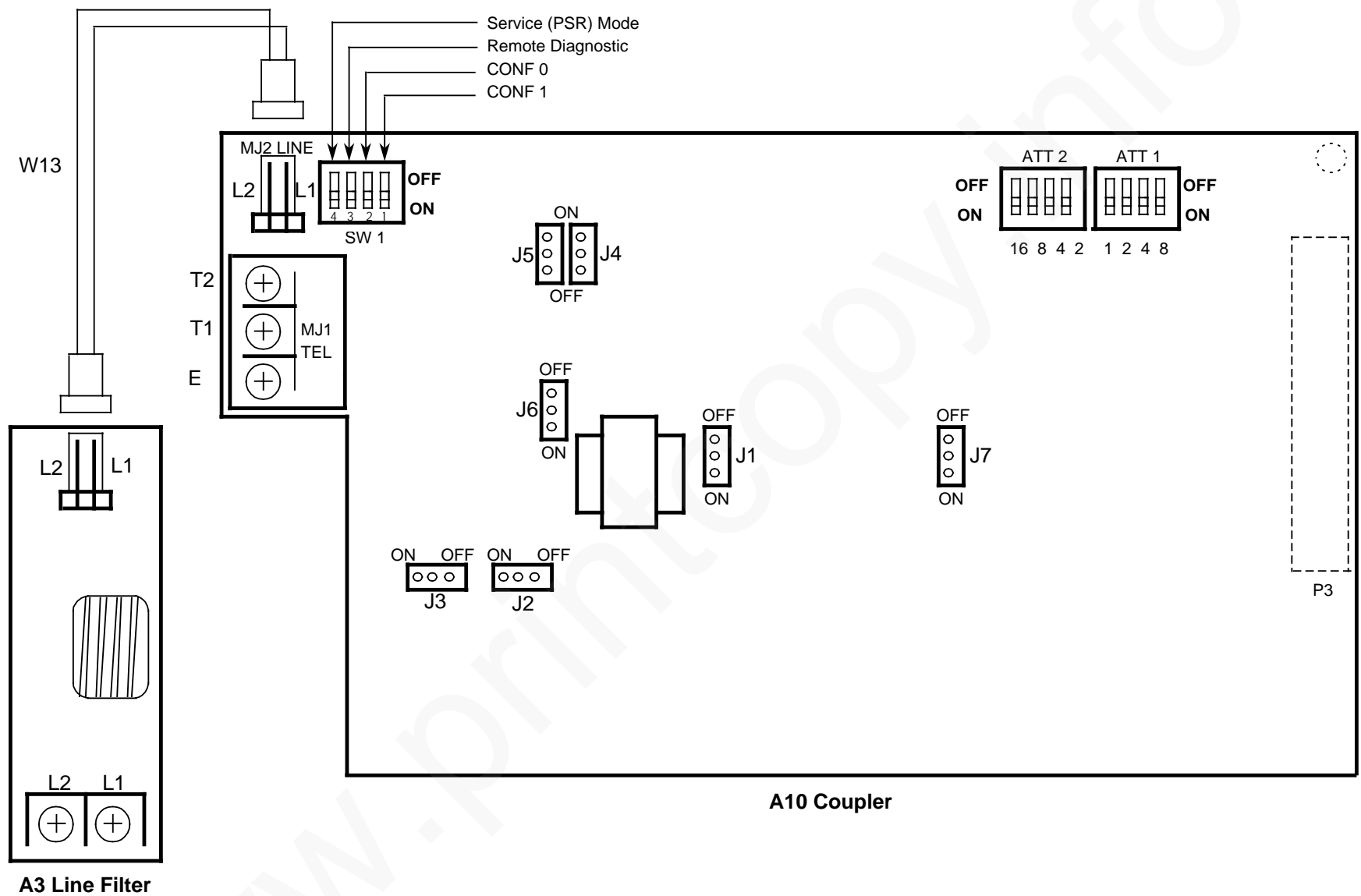


Figure 1 RX A10 Coupler and A3 Line Filter PWB

7017-302

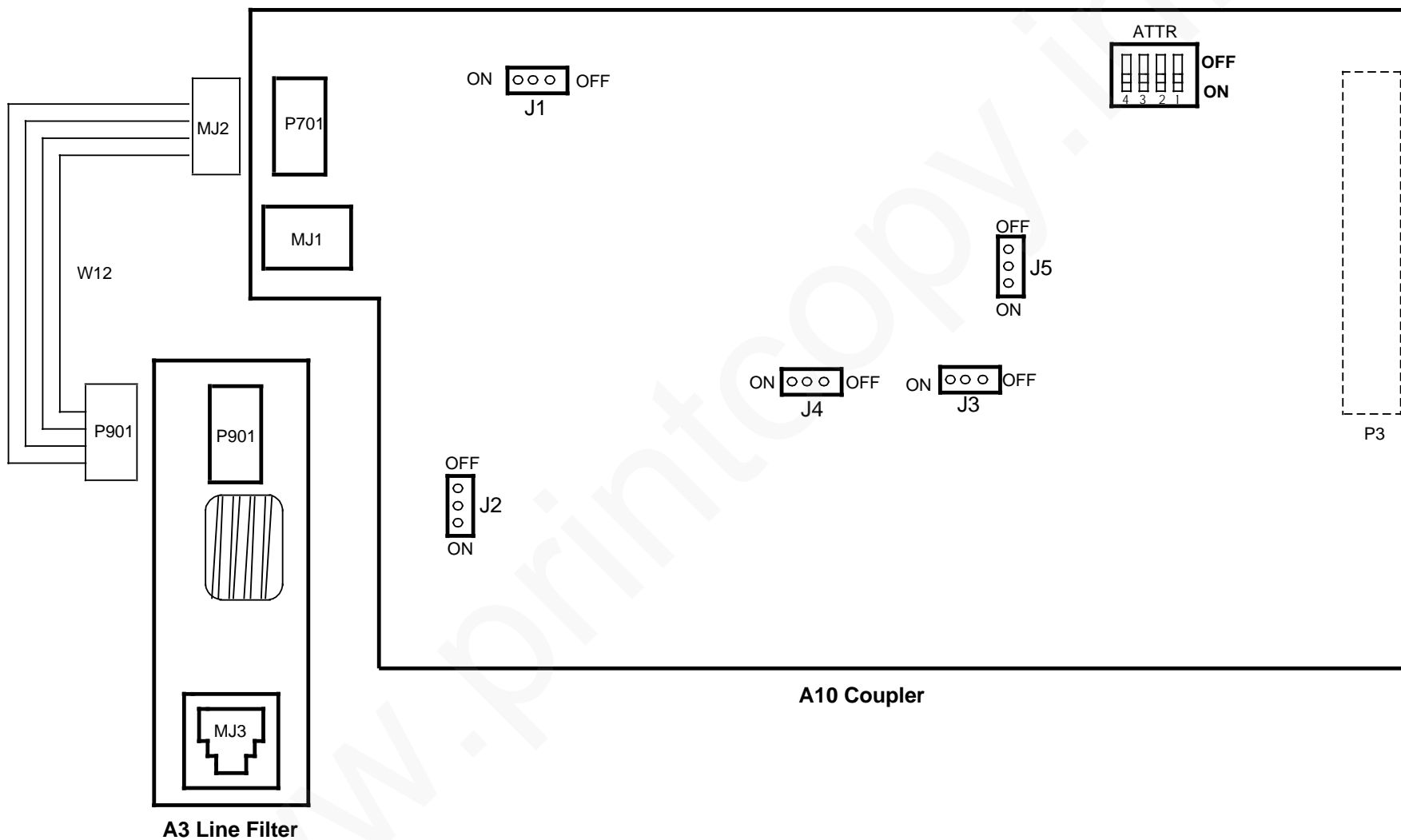


Figure 2 US A10 Coupler and A3 Line Filter PWB

7017-303



**Table 1**  
**USO/XC A10 Coupler**  
**ATT Switch Setting Transmit Power Level.**

SW	BIT SW	Bit Definition		Mfg. SETTING	Note
		OFF	ON		
ATT	1		-1dBm	OFF	<b>CAUTION</b> <b>DO NOT CHANGE</b> USO / XC Transmit power level
	2		-2dBm	ON	
	3		-4dBm	OFF	
	4		-8dBm	ON	

Table 2 RX Coupler Links		
LINKS	FUNCTION	DEFAULT
Link J 1	Line hold resistance	ON
Link J 2	3/4 Wire Configuration ( J2, J3 ON=3 wire ) ( J2, J3 OFF=4 wire )	OFF
Link J 3	3/4 Wire Configuration ( J2, J3 ON=3 wire ) ( J2, J3 OFF=4 wire )	OFF
Link J 4	Determines Ringing Threshold Level Refer to Figure 2A for settings	ON
Link J 5	Determines Ringing Threshold Level Refer to Figure 2A for settings	ON
Link J 6	Selects capacitance of ring circuit: ( J6 ON = 2uF ) ( J6 OFF = 0.5uF )	OFF
Link J 7	Provides 0.5 dbm incremental step in transmit level ( see Table 4 )	OFF

**Table 2A**  
**RX Coupler Links J4 and J5**

THRESHOLD	LINK J 4	LINK J 5
6 volts r.m.s	OFF	OFF
11 volts r.m.s.	ON	OFF
16 volts r.m.s.	OFF	ON
21 volts r.m.s.	ON	ON

**Table 3**  
**RX Coupler Switch 1**

SW	BIT SW	Bit Definition				Mfg. SETTING	Note
		OFF		ON			
SW 1	4	Disable		Enable		OFF	Service (PSR) Mode
	3	Disable Remote Diag.		Enable Remote Diag.		OFF	Auto Diagnostic
	2	OFF	ON	OFF	ON	ON	SW1, BIT 1 and 2 Determine CONF. 4, 5, 6, and 7
	1	: CONF.7	: CONF.6	: CONF.5	:CONF.4	ON	
		OFF	OFF	ON	ON		

**Table 3A**  
**RX Coupler Switch 1**  
**Switch Bits 1 and 2**

SW	CONFIGURATION	Switch Bit Definition		Note
		1	2	
1	CONF. 4	ON	ON	Remove Power to make changes. Power UP to effect changes.
	CONF. 5	ON	OFF	
	CONF. 6	OFF	ON	
	CONF. 7	OFF	OFF	

**Table 3B**  
**RX Coupler Switch 1**  
**Switch Bits 3 and 4**

SW	Bit SW	Switch Bit Definition		Note
		OFF	ON	
1	4	Disabled	Enabled	Remove Power to make changes. Power UP to effect changes.
	3	Disabled	Remote Diagnostic	

**Table 4**  
**RX Coupler Switch ATT 1 and ATT 2**

SW	Bit SW	Bit Definition		Mfg. Settings	Note
		OFF	ON		
ATT 1	1		-8dBm	ON	Transmit power level, default setting is -10dBm. (see Note 1)
	2		-4dBm	OFF	
	3		-2dBm	ON	
	4		-1dBm	OFF	
ATT 2 Note 2 Note 3	1		-2dBm	ON	Telephone Network tone detection level (see Table 4A for settings)
	2		-4dBm	OFF	
	3		-8dBm	OFF	
	4		-16dBm	ON	

**NOTE 1:** When Coupler Link J7 is positioned "ON," Link J7 will provide an additional -0.5 dBm incremental step to ATT 1 Bits 1, 2, 3, and 4.  
**Example:** When Link J7 is ON, the default setting will be -10.5dBm.

**NOTE 2:** These attenuator switches only adjust the receive signal levels from the Telephone Network (dial tone, etc.). They have no effect on the actual facsimile data receive level. To select different receive levels using ATT2, System "Data 41, bit 4 must be set to "0" (zero) position.

**NOTE 3:** For Facsimile data receive levels there are two threshold levels provided, selectable via System Data 18, bit 1.  
 Bit 1 ON = -47 dBm for group 3 (default)  
 Bit 1 OFF = -43 dBm for group 3

**Table 4A**  
**RX Coupler ATT 2 Switch Settings**

Minimum Signal Level (dBm)	ATT 2 Bit Switch settings			
	1	2	3	4
-11	ON	ON	ON	ON
-13	OFF	ON	ON	ON
-15	ON	OFF	ON	ON
-17	OFF	OFF	ON	ON
-19	ON	ON	OFF	ON
-21	OFF	ON	OFF	ON
-23	ON	OFF	OFF	ON
-25	OFF	OFF	OFF	ON
-27	ON	ON	ON	OFF
-29	OFF	ON	ON	OFF
-31	ON	OFF	ON	OFF
-33	OFF	OFF	ON	OFF
-35	ON	ON	OFF	OFF
-37	OFF	ON	OFF	OFF
-39	ON	OFF	OFF	OFF
-41	OFF	OFF	OFF	OFF

## Remote Diagnostic for USO, XCI and RX

**USO , XCI** - This feature is incorporated in all production terminals and can be controlled by the operator to an "OFF" or "ON" status from the control panel. Production terminals will have Remote Diagnostic turned "ON" when shipped.

**RX** - This feature is incorporated in all production terminals and is controlled by a dip switch mounted on the coupler (see Table 3). Production terminals will have Remote Diagnostic turned "OFF" when shipped.

The function of Remote Diagnostics is to allow a central test terminal to control specified functions in a remote terminal.

The central test terminal will contain a non-production level of firmware allowing it to issue commands to the remote terminal.

**USO, XCI, RX Operation** - Remote diagnostic is entered when the central test terminal operator presses the JOB RESERVE key after terminal is in Service Mode. Display messages will prompt the operator to make connection.

If Remote Diagnostics is disabled at the remote terminal, a message will be displayed along with a 5 second alarm.

If Remote Diagnostics is enabled at the remote terminal, a message will be displayed along with a 1 second alarm. Display messages will prompt the operator to select a specified function. The results will either be displayed or printed.

Disconnect is automatic if no function is selected within 60 seconds. If a function is selected, disconnect is made at the central terminal by pressing the STOP key. While under control of the central terminal, the remote terminal control panel keys will be inoperative except for the STOP key.

Specified functions:

Menu 21 - Activity Report

Menu 22 - Options Report

Menu 23 - Dial Directory Report

Menu 24 - Diagnostic

Menu 25 - Job Reserve

Menu 32 - Date and Time

Menu 33 - Local Terminal I.D. Number

Menu 34 - Local Terminal Name

Menu 35 - Company Logo

Menu 36 - Panel Defaults

Menu 81 - System Data Setup

Menu 82 - Ram Clear

Menu 83 - Counter Reset

Copy Loopback - Local Scanner to Remote  
Memory to Local Printer Operation

## System Data Setup

System Data consists of 43 software switches that can be set to enable or disable various parameters that control the operation of the terminal (Table 1). Some system data parameters can be set by the operator from the control panel. All can be set by the service representative from the control panel. Some parameters will never be used, but all are documented. If in doubt about specific system data parameters, contact the TSC.

1. Enter Service Mode.
2. Select Menu 81.

The display indicates:

```
81  SYSTEM DATA SETUP
    PRESS[START]OR[SCROLL]
```

3. Press Start.

The display indicates:

```
81  CAUTION: CHANGE WILL EFFECT OPERATION
    PRESS [START] OR [STOP]
```

4. Press Start.

The display indicates:

```
81  SYSTEM DATA NUMBER>01 DATA 00000000
    ENTER 2 DIGIT SYSTEM DATA NUMBER
```

*NOTE: The display returns to Idle after 30 seconds. It is advisable to have the needed information ready to input.*

### CAUTION

*Do not arbitrarily change System Data Parameters. To do so may violate CCITT Standards and cause improper Terminal operations.*

## Setting System Data Parameters

1. How to set system data parameters

Do not set System Data Parameters without a current Service Mode Options Report. The options report contains the current settings of all system data parameters. Use this report as a reference guide. From the Service Mode, obtain the Options Report for reference.

2. Locate and enter the System Data Parameter.
  - a. Find the System Data Parameter you wish to change in the Description column in Table 1. Under the System Data Number column obtain the System Data Number.
  - b. Under the Table Number column in Table 1, find the Table number to obtain the System Data Parameter information.

When System Data is selected and the display below appears:

```
81  SYSTEM DATA NUMBER>01 DATA 00000000
    ENTER 2 DIGIT SYSTEM DATA NUMBER
```

- c. Enter the System data number.
- d. Press Enter.
- e. Press the Select button to move the cursor beneath the bit number you wish to change.
- f. Press the number "1" or "0" on the keypad.
- g. Move the cursor to the next bit number or press Enter to effect the change.
- h. Press Stop.
- j. When selection is complete, obtain another copy of the Options Report to verify your selections.

Refer to Examples 1 and 2.

### Example 1:

The Display example below is an enlargement of the Data bit numbers as seen in the display. Above it are the corresponding bit numbers found in Tables 2 through 21 on the following pages.

In this example, "**Scan registration**," is the System Data Parameter selected. The System Data Number is 10 and the table containing the data information is Table 10, refer to Table 10.

To adjust the Scan registration, move the cursor to bits 3, 2, 1 or 0 and make your input at each bit number.

In the display below, the Scan registration adjustment is set at minus 1.0mm.

BITS 7 6 5 4 3 2 1 0

DATA 0 0 0 0 0 1 1 0

### Example 2:

The system data selected is "**Auto Answer Delay**." The System Data Number is 27 and the table containing the data information is Table 17. Refer to Table 17. Notice that this parameter can also be set by the operator, using Operator Menu 57. Bits 6 and 7 control the Auto Answer Delay.

To adjust the Auto Answer Delay, move the cursor to bits 6 or 7 and make your input at each bit number.

In the display below, the Auto Answer Delay is set at 5 seconds.

BITS 7 6 5 4 3 2 1 0

DATA 0 1 0 0 0 0 0 0

**Table 1 System Data Numbers**

Operator Menu Number	System Data Number	System Data Description Parameter	Options	Use Table Number
51	2	Activity Report	Manual or Auto Print	3
	7	Amplitude equalizer	On or Off	8
45	2	Audible Monitor	Enable or Disable	3
57	27	Auto answer delay	0, 5, 10 or 15 Seconds	21
	7	Cable equalizer	Auto or Fixed	8
	7	CABS 1	On or Off	8
	7	CABS 2	On or Off	8
	7	CABS 1 in G2 sending	On or Off	8
	7	CABS 2 in G2 sending	On or Off	8
32	2	Clock Indication	24 or 12 Hours	3
	5	Coding method	MMR, MR or MH	6
93	3	Communication Mode	Auto, G3 + G2 or G2	4
	17	Confidential send	Enable or Disable	15
	4	Continuous error line with standard to send RTN	6, 12, 24 or 48 lines	5
16	27	Continuous poll	On or Off	21
	40	Country selection	Configuration 2 or Specific Countries	25
	23	CTC Fallback Times	1 or 2 CTC's	18
	10	Cutter position adjustment (mm)	-4 to + 3.5 mm by .5 mm steps	10
	9	Debug mode	Enable or Disable	9
	7	Delay equalizer	On or Off	8
	41	Dialing	DTMF or Pulse	26
	43	Dial pause in Blind Dial	0-7 seconds	28
	41	Dial tone detect	Detect, Not Detect Initial, or Not Detect	26
	41	Dial tone signal level	Detect or Not Detect	26
	41	Dialing Rate	10 or 20 pulses per second	26
	16	Document length adjustment	Accommodates Cut Paper Terminals	14
	18	ECM frame size	256 or 64 Bytes	16
	22	EOR Send	Continue or Disconnect After EOR	17
36	2	Error Correct Mode	Enable or Disable	3
	18	Fallback with CTC in ECM	On or Off	16
	5	Fallback for 9600 and 7200BPS	Fallback at 1st. or 2nd. FTT	6
	5	First received DIS without NSF	Accept or Ignore DIS	6
	5	Forced MH for 4800BPS	Auto or Forced MH	6
	11	G2 Threshold Level for Modem Control	Lightest to Darkest	11

**Table 1 System Data Numbers**

Operator Menu Number	System Data Number	System Data Description Parameter	Options	Use Table Number
92	3	G3 Receive Speed	96, 72, 48 or 2400 BPS	4
91	3	G3 Send Speed	96, 72, 48 or 2400 BPS	4
56	6	Halftone contrast	Light or Dark	7
	28	Interval Timer for Continuous Poll	No Interval to 255 Minutes	22
	29	Interval Timer for 4 Successful Dialings	No Interval to 255 Minutes	23
	30-39	Interval Timer for 1st through 10th Redial	No redial to 255 Minutes	24
	24	J3L EQL for modem	On or Off	19
52	2	Key Tone	Enable or Disable	3
	41	Line current	Detect or Not Detect	26
	4	Line error rate to send RTN	5, 10, 15 or 20%	5
44	1	Local Name	Enable or Disable	2
	41	Manual dialing	Enable or Disable	26
	2	Manual RCV Mode after Job End	Return to Auto or Previous mode	3
	15	Minimum recording length	50, 80, 140 or 200 mm	13
	18	Minimum signal level	-43 or 47 dbm	16
	23	Modem to FSK mode after PPR	Set or not set	18
	6	MTF for halftone	Enable or Disable	7
	27	Multi-Poll Report	Enable or Disable	21
	27	Operational Priority	On or Off	21
	42	Pause time	1 to 16 seconds	27
	23	PPR receiving times until CTC sent	1, 2, 3 or 4 times	18
94	9	Protocol monitor	Manual, Print on Error or Print Always	9
41	1	Receive Header Print	Auto, Forced or Disable	2
42	1	Receive Header Print Logo	Company Logo, Xerox Logo or Disable	2
	27	Receive to memory	Enable or Disable	21
	41	Redial	Enable or Disable	26
53	27	Remote diagnostics	Enable or Disable	21
	23	Remote diagnostics preamble length	300 or 1000ms	18
	42	Ring time for auto answer	1 to 16 seconds	27
	24	RL EQL for modem	On or Off	19
	10	Scan position adjustment (mm)	-4 to + 3.5 mm by .5 mm steps	10
	4	Send CSI	Enable or Disable	5



**Table 1 System Data Numbers**

Operator Menu Number	System Data Number	System Data Description		Use Table Number
		Parameter	Options	
46	2	Send Partial Batch	Send or Cancel when Memory Full	3
	4	Send TSI/CIG	Auto, Forced or Disable	5
	9	Service mode	Enable or Disable	9
54	3	Speaker Volume	Lower, Low, High or Higher	4
	24	T2 EQL for modem	T or T/2 Mode	19
	18	T5 timer for ECM in minutes	1 to 63 minutes	16
	22	TAP Hold	On or Off	17
	43	Time out for end of dial	35, 48, 60 or 90 seconds	28
	23	Times CTC is transmitted in ECM	0 to 7 times	18
	24	TL EQL for modem	On or Off	19
	26	Training in PIX Select	Modem to High Speed only or to HS after FSK	20
58	2	Transmission Failure Report	Enable or Disable	3
43	1	Transmit Header Print	On, Off or Disable	2
	9	Transmission mode	Auto, 4800 BPS or MF	9
55	12	Video Threshold Level Normal	Lightest to Darkest	12
55	13	Video Threshold Level Light	Lightest to Darkest	12
55	14	Video Threshold Level Dark	Lightest to Darkest	12
	6	Voice Request	Enable or Disable	7
	24	Wait Printing in ECM receiving	Wait or Not Wait	19

**Table 2**  
**System Data: 01**

Menu No.	System Data Description	Bit No.	Bit Definition				Default	
			0		1		USO	RX
41	For Conf. 0 & 1 Receive header print	0	0	1	0	1	0	0
		1	:Auto	:Forced	:Disable	: Disable	0	0
42	Receive header print Logo	2	0	1	0	1	1	1
		3	:Company logo	:XEROX logo	:Disable	: Disable	0	0
43	Transmit header print	4	0	1	0	1	1	1
		5	:Disable	:ON	:OFF	: Disable	0	0
44	Local name	6	Disable		Enable		0	0
-	NOT USED	7					0	0

**Table 3**  
**System Data: 02**

Menu No.	System Data Description	Bit No.	Bit Definition		Default	
			0	1	USO	RX
51	Activity Report	0	Manual print	Auto print	1	1
58	Transmit failure report	1	Disable	Enable	0	0
52	Key tone	2	Disable	Enable	1	1
46	Note 1	3	Send Partial Batch	Cancel	0	1
32	Clock indication	4	24 hours	12 hours	1	1
-	Manual RCV Mode after job end	5	Previous Mode	Auto RCV Mode	1	1
45	Audible monitor	6	Disable	Enable	1	0
36	Error correct mode	7	Disable	Enable	1	0

**NOTE 1:**  
When memory buffer is full, buffer can be set to Cancel or Send Partial Batch (data) stored in buffer.

**Table 4**  
**System Data: 03**

Menu No.	System Data Description	Bit No.	Bit Definition				Default	
			0		1		USO	RX
91	G3 send speed	0	0	1	0	1	0	0
		1	:9600	:7200	:4800	:2400	0	0
92	G3 receive speed	2	0	1	0	1	0	0
		3	:9600	:7200	:4800	:2400	0	0
93	Comm. Mode	4	0	1	0	1	0	0
		5	:Auto	:CCITT G3 +G2	:CCITT G2	:N/A	0	0
54	Speaker Volume	6	0	1	0	1	1	1
		7	:Lower	:Low	:High	:Higher	0	0

**Table 5**  
**System Data: 04**

System Data Description	Bit No.	Bit Definition				Default	
		0		1		USO	RX
Send CSI	0	Enable		Disable		0	0
Send TSI/CIG Note 1	1	0	1	0	1	0	0
	2	:Auto	:Forced	:Disable	:Auto	0	0
FX only	3	MF2		MF1		0	0
Line error rate to send RTN	4	0	1	0	1	0	1
	5	:5%	:10%	:15%	:20%	0	0
Continuous error line with standard to send RTN	6	0	1	0	1	0	0
	7	:6 lines	:12 lines	:24 lines	:48 lines	0	0

*NOTE 1: (RX Only)  
Default of ZZF configuration is "forced."*

**Table 6**  
**System Data: 05**

System Data Description	Bit No.	Bit Definition				Default	
		0	1	0	1	USO	RX
Coding method	0	0	1	0	1	0	0
	1	:MMR	:MR	:MH	:N/A	0	0
For 9600, 7200BPS	2	Fallback at 2nd FTT	Fallback at 1st FTT			1	1
For 4800BPS	3	Auto	Forced MH			0	0
NOT USED	4					0	0
1st receive DIS without NSF	5	Accept DIS	Ignore DIS			0	0
NOT USED	6					0	0
NOT USED	7					0	0

**Table 7**  
**System Data: 06**

Menu No.	System Data Description	Bit No.	Bit Definition		Default	
			0	1	USO	RX
-	Voice Request Note 1	0	Enable	Disable	1	1
-	NOT USED	1			0	0
-	NOT USED	2			0	0
-	For halftone	3	MTF disable	MTF enable	0	0
56	For halftone	4	Light	Dark	1	1
-	NOT USED	5			0	0
-	NOT USED	6			0	0
-	NOT USED	7			0	0

**NOTE 1:**  
No response received from remote, 20 seconds after sending DIS.

**Table 8**  
**System Data: 07**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
NOT USED	0			0	0
Cable Equalizer	1	Auto cable equalizer	Fix cable equalizer	0	0
CABS1 in G2 sending	2	OFF	ON	0	0
CABS2 in G2 sending	3	OFF	ON	1	1
Delay equalizer	4	OFF	ON	0	0
Amplitude Equalizer	5	OFF	ON	0	0
CABS1	6	OFF	ON	0	0
CABS2	7	OFF	ON	1	1

**Table 9**  
**System Data: 09**

Menu No.	System Data Description	Bit No.	Bit Definition		Default	
			0	1	USO	RX
	FX Only	0	Stamp Off	Stamp On	NA	NA
	NOT USED	1			0	0
36	Transmission mode	2	0 :Auto	1 :4800BPS :MF :N/A	0	0
		3	0	0 1 (FX only) 1	0	0
94	Protocol monitor	4	0 :Manual	1 :Print in error	0	0
		5	0	0 1 always 1 :N/A	0	0
	Service Mode	6	Disable	Enable	0	0
	Debug Mode	7	Disable	Enable	0	0

**Table 10**  
**System Data: 10**

System Data Description	Bit No.	Bit Definition			Default	
		0	1		USO	RX
Scan Registration (mm)	0	<b>3210</b> 0000: (-4.0)	<b>3210</b> 0110: (-1.0)	<b>3210</b> 1100: (+2.0)	0	0
	1	0001: (-3.5)	0111: (-0.5)	1101: (+2.5)	0	0
	2	0010: (-3.0)	1000: (±0)	1110: (+3.0)	0	0
	3	0011: (-2.5)	1001: (+0.5)	1111: (+3.5)	1	1
Cutter Registration (mm)	4	<b>7654</b> 0000: (-4.0)	<b>7654</b> 0110: (-1.0)	<b>7654</b> 1100: (+2.0)	0	0
	5	0001: (-3.5)	0111: (-0.5)	1101: (+2.5)	0	0
	6	0010: (-3.0)	1000: (±0)	1110: (+3.0)	0	0
	7	0011: (-2.5)	1001: (+0.5)	1111: (+3.5)	1	1

**Table 11**  
**System Data: 11**

System Data Description	Bit No.	Bit Definition			Default	
		0	1		USO	RX
G2 Threshold Level for Modem control.	0	Examples:			0	0
	1	<u>Bit Numbers</u>			0	0
	2	<b>76543210</b>			1	1
	3	<u>Binary</u>	<u>Hex Code</u>	<u>Note</u>	0	0
	4	00000000	00H	Darkest	1	1
	5	01110100	74H	Default USO/RX	1	1
	6	11111111	FFH	Lightest	1	1
	7				0	0

**Table 12**  
**System Data: 12,13, and 14**

Menu No.	System Data Description	Bit No.	Bit Definition		Default	
			0	1	USO	RX
55	Video Threshold Level for Normal 12, Light 13, and Dark 14.	0	Examples:		Note 1	Note 1
		1	<u>Bit Numbers</u>		Note 1	Note 1
		2	<b>76543210</b>		Note 1	Note 1
		3	<u>Binary</u>	<u>Hex Code</u>	<u>Note</u>	Note 1
		4	00000000	00H	Lightest	Note 1
		5	00100011	23H	Default Normal---12	Note 1
		6	00101000	28H	Default Light ---13	Note 1
		7	00010100	14H	Default Dark ---14	Note 1
			11111111	FFH	Darkest	Note 1

Note 1: Use binary and hex codes under Bit Definition for appropriate settings depending upon which system data is being set 12, 13 or 14.

**Table 13**  
**System Data: 15**

System Data Description	Bit No.	Bit Definition				Default	
		0		1		US	RX
Minimum recording length.	0	0	1	0	1	1	1
	1	:50mm	:80mm	:140mm	:200mm	1	1
NOT USED	2					0	0
NOT USED	3					0	0
NOT USED	4					0	0
NOT USED	5					0	0
NOT USED	6					0	0
NOT USED	7					0	0

**Table 14**  
**System Data: 16**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
See Note 1.	0	Adjustment of document length for sending to CUT PAPER FAX which does not have infinite length indication in DIS field.		0	0
	1			0	0
	2			1	1
NOT USED	3			0	0
NOT USED	4			0	0
NOT USED	5			0	0
NOT USED	6			0	0
NOT USED	7			0	0

**NOTE 1:**  
Judge length of one page by :  
 $A + 2.5 \times N(\text{mm})$   
Where A=292mm (A4) and  
359mm (B4) and N=0 7.

**Table 15**  
**System Data: 17**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
Confidential send	0	Disable	Enable (Note 1)	Note 2	Note 2
NOT USED	1			0	0
NOT USED	2			0	0
NOT USED	3			0	0
NOT USED	4			0	0
NOT USED	5			0	0
NOT USED	6			0	0
NOT USED	7			0	0

**NOTE 1:**  
When confidential send is enabled,  
terminal stores document to  
memory before sending.

**NOTE 2:**  
Set to 1's for Tag 2 terminals  
and to 0's for pre-Tag 2 terminals.



**Table 16**  
**System Data: 18**

System Data Description	Bit No.	Bit Definition		Default			
		0	1	USO	RX		
ECM frame size	0	256 bytes	64 bytes	0	0		
Min. signal level	1	-43dBm	-47dBm	0	1		
In ECM	2	Not fallback with CTC	Fallback with CTC	1	1		
T5 timer for ECM (minutes)	3	<b>76543</b> 00000 : (1)	<b>76543</b> 01000 : (17)	<b>76543</b> 10000 : (33)	<b>76543</b> 11000 : (49)	1	1
	4	00001 : (3)	01001 : (19)	10001 : (35)	11001 : (51)	0	0
	5	00010 : (5)	01010 : (21)	10010 : (37)	11010 : (53)	1	1
		00011 : (7)	01011 : (23)	10011 : (39)	11011 : (55)		
	6	00100 : (9)	01100 : (25)	10100 : (41)	11100 : (57)	0	0
	7	00101 : (11)	01101 : (27)	10101 : (43)	11101 : (59)	0	0

**Table 17**  
**System Data: 22**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
NOT USED	0			0	0
NOT USED	1			0	0
NOT USED	2			0	0
NOT USED	3			0	0
NOT USED	4			0	0
NOT USED	5			0	0
After Send EOR	6	Continue	Disconnect	0	0
TAP Hold (Note 1)	7	OFF	ON	1	1

**NOTE 1:**  
TAP Hold is one control method of modem in G3-ECM Receiving. It holds the equalizer tap of the modem in the first training. With this control, the modem will not be affected by noise, even if noise is mixed with signal during the second training.

**Table 18**  
**System Data: 23**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
Number of times CTC is transmitted in ECM .	0	<b>210</b> 000: (0)	<b>210</b> 100: (4)	1	1
	1	001: (1)	101: (5)	1	1
	2	010: (2) 011: (3)	110: (6) 111: (7)	0	0
Modem to FSK mode after PPR sent 4 times	3	Not set	Set	0	0
PPR receiving times until CTC sent	4	0 1 :1 Time	0 1 :2 Times :3 Times :4 Times	1	1
	5	0 0	1 1	1	1
CTC fallback times	6	1 CTC	2 CTC	0	0
Remote Diag. preamble length	7	300 ms	1000 ms	0	0

**Table 19**  
**System Data: 24**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
TL EQL for Modem	0	OFF	ON	0	0
NOT USED	1			0	0
RL EQL for Modem	2	OFF	ON	0	0
T2 EQL for Modem	3	T mode	T/2 mode	0	0
NOT USED	4			0	0
J3L EQL for Modem	5	OFF	ON	0	0
NOT USED	6			0	0
Wait printing in ECM receiving	7	Wait	Not Wait	0	0

**Table 20**  
**System Data: 26**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
NOT USED	0			0	0
NOT USED	1			0	0
NOT USED	2			0	0
NOT USED	3			0	0
NOT USED	4			0	0
NOT USED	5			0	0
Select Training Method in PIX start	6	Set Modem to high speed mode after set to FSK mode.	Set modem to high speed mode only. (Normal Training Method)	1	1
NOT USED	7			0	0

**Table 21**  
**System Data: 27**

Menu No.	System Data Description	Bit No.	Bit Definition		Default	
			0	1	USO	RX
-	Operational Priority Note 1	0	OFF	ON	1	1
16	Continuous Poll	1	OFF	ON	0	0
53	Remote Diag Note 2	2	Disable	Enable	1	0
-	Receive to memory	3	Disable	Enable	1	0
-	NOT USED	4			0	0
-	Multi-Poll Report	5	Enable	Disable	Note 3	Note 3
57	Auto answer delay	6	0 :0 Sec	1 :5 Sec	0	0
		7	0 :10 Sec	1 :15 Sec	0	0

**NOTE 1:**  
If Operational priority is set to ON the machine will take the Control Panel setting for Resolution and Original in place of setting for these parameters in the dial Directory. If set to OFF the Dial Directory setting will be implemented.

**NOTE 2:**  
Configuration 4,5,6, and 7 is dependent on REMOTE DIAGNOSTIC switch SW 1, bit 3 on RX A10 Coupler.

**NOTE 3:**  
Only available in terminals with Tag/MOD 2 or above.

**Table 22**  
**System Data: 28**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
Interval Timer for Continuous Poll.	0	Examples:		1	1
	1	<u>Bit Numbers</u>		0	0
	2	<b>76543210</b>		1	1
	3	<u>Binary</u>	<u>Hex Code</u>	0	0
	4	00000000	00H	0	0
	5	00000101	05H	0	0
	6	11111111	FFH	0	0
	7	<u>Note</u> No Interval Default 5 minutes 255 minutes		0	0

**Table 23**  
**System Data: 29**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
Interval Timer for 4 Successful Dialings.	0	Examples:		1	1
	1	<u>Bit Numbers</u>		0	0
	2	<b>76543210</b>		1	1
	3	<u>Binary</u>	<u>Hex Code</u>	0	0
	4	00000000	00H	0	0
	5	00000101	05H	0	0
	6	11111111	FFH	0	0
	7	<u>Note</u> No Interval Default 5 minutes 255 minutes		0	0

**Table 24**  
**System Data: 30 through 39**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
Interval Timer for 1st through 10th Redials.  (See Note 1)	0	Examples:		Note 2	Note 2
	1	<u>Bit Numbers</u>		Note 2	Note 2
	2	<b>76543210</b>		Note 2	Note 2
	3	<u>Binary</u>	<u>Hex Code</u>	Note 2	Note 2
	4	00000000	00H	Note 2	Note 2
	5	Note 2 Description		Note 2	Note 2
	6	00000101	05H	Note 2	Note 2
	7	11111111	FFH	Note 2	Note 2

**NOTE 1:** Use binary and hex codes under Bit Definition for appropriate settings depending upon which system data is being set:

30---1st redial  
31---2nd redial  
32---3rd redial  
33---4th redial  
34---5th redial  
35---6th redial  
36---7th redial  
37---8th redial  
38---9th redial  
39---10th redial

**NOTE 2:** Refer to Note 2 Description.

**Table 25**  
**System Data: 40**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
Country Selection Note 1	0	<b>76543210</b>	<b>76543210</b>	0	0
	1	00000000 : CONFIG 2	00001100 : UK (default)	0	0
	2	00000001 : AUSTRIA	00001101 : UK PBX	0	1
	3	00000010 : BELGIUM	XXX1XXXX : NON SPEC	0	1
	4	00000011 : DENMARK	00001110 : NORWAY	0	0
	5	00000100 : FINLAND	00001111 : FRANCE	0	0
	6	00000101 : GERMANY		0	0
	7	00000110 : ITALY		0	0

**NOTE 1:**

X=Don't care state

UK (default)--- also used for Singapore, Hong Kong and Portugal.

**Table 26**  
**System Data: 41**

System Data Description	Bit No.	Bit Definition		Default	
		0	1	USO	RX
Redial	0	Does not redial	Redial	0	0
Dialing	1	DTMF dialing	Pulse dialing	0	1
Dialing Rate	2	10 pps	20 pps	0	0
Manual dial	3	Enable	Disable	0	1
Dial tone signal level	4	Signal level detect (Note 1)	Signal level not detect	1	1
Line current	5	Detect (Note 2)	Not detect	1	1
Dial tone detect (See Note 3)	6	0 : Not Detect	1 : Not Detect	1	0
	7	0 : Not Detect	1 : Detect Initial	1	0

**NOTE 1:**

USO: When Bit 4 = 0, dial tones above -25 dBm are valid; dial tones below -25 dBm are invalid.

RX only: When Bit 4 = 0, ATT2 is disabled. Telephone Network tone detection level defaults to -51 dBm. (This does not affect facsimile data receive level.) Signal level detect can be adjusted in accordance with Table 4A under Installation in this Service Manual.

**NOTE 2:**

When Bit 5 = 0, breaks of >2 seconds in line current will be detected after going on line.

**NOTE 3:**

Bit 6=0, Bit 7=0 Not Detect: The auto dialer will not look for dial tone at all. Initially the autodialer will wait for the time specified in system data byte 43 and then dial. When a pause is inserted in the digit train the autodialer will wait for the time set in system data byte 42 and then continue dialing.

Bit 6=1, Bit 7=0 Not Detect: Same as Bit 6=0, Bit 7=0

Bit 6=0, Bit 7=1 Not Detect Initial: The autodialer will not look for the first dial tone (for example, ignore PBX dial tone), it will wait for the time set up in system data byte 43 and then start dialing. When a pause is inserted, the autodialer will go to detect dial tone.

Bit 6=1, Bit 7=1 Detect: The autodialer will look for the first dial tone and will also look for dial tone when a pause is inserted.

**Table 27**  
**System Data: 42**

System Data Description	Bit No.	Bit Definition			Default	
		0	1		USO	RX
Ring time in Auto Answer (seconds). Note 1	0	<b>3210</b> 0000 : (1)	<b>3210</b> 0110 : (7)	<b>3210</b> 1100 : (13)	0	0
	1	0001 : (2)	0111 : (8)	1101 : (14)	0	0
	2	0010 : (3)	1000 : (9)	1110 : (15)	0	1
	3	0011 : (4) 0100 : (5) 0101 : (6)	1001 : (10) 1010 : (11) 1011 : (12)	1111 : (16)	0	0
Pause time (seconds).	4	<b>7654</b> 0000 : (0)	<b>7654</b> 0110 : (6)	<b>7654</b> 1100 : (12)	0	0
	5	0001 : (1)	0111 : (7)	1101 : (13)	0	1
	6	0010 : (2)	1000 : (8)	1110 : (14)	1	0
	7	0011 : (3) 0100 : (4) 0101 : (5)	1001 : (9) 1010 : (10) 1011 : (11)	1111 : (15)	0	0

**NOTE 1:**

Do not change. Make all changes in Menu 57, System Data 27, Table 21.

**Table 28**  
**System Data: 43**

System Data Description	Bit No.	Bit Definition				Default	
		0	1			USO	RX
Dial Pause in Blind Dial (seconds).	0	<b>210</b> 000 : (0)	<b>210</b> 100 : (4)			0	0
	1	001 : (1)	101 : (5)			1	0
	2	010 : (2) 011 : (3)	110 : (6) 111 : (7)			1	1
NOT USED	3					0	0
NOT USED	4					0	0
NOT USED	5					0	0
Time out for end of dial.	6	0 : 35 sec	1 : 48 sec	0 : 60 sec	1 : 90 sec	1	0
	7	0	0	1	1	0	1

## Change Tag/MOD Index

The Tag/MOD matrix is located inside the right side frame. All important modifications to the terminal that are installed in the factory or in the field, are identified by a number marked on this matrix. The appropriate Tag/MOD number should be marked off or removed from the matrix whenever a Tag/MOD is installed. Determine the Tag/MOD level of the terminal by the Tag/MOD matrix located inside of the terminal.

Refer to the Tag classification for information as to when to use the tag. Read the description to determine how the terminal will benefit from the Tag/MOD. Refer to the kit number to order the modification kit. Refer to the bulletin number for additional tag information.

Refer to the Factory and field install serial numbers to determine which Tag/MOD(s) were installed at the factory and which were be installed in the field. The manual is revised to include the latest machine changes listed in Table 1 Factory/Field Change Tag/MOD Index.

### USO: Tag/MOD Classification

Classification of Tag/MOD (s) are identified below by a letter (M, R, O, or N). The list below defines the degree of importance assigned to each letter:

- M** Mandatory
- R** Install at time of repair
- O** Optional
- N** Not for field retrofit. Factory retrofit only.

### RX: Tag/MOD Classification

Classification of the Tag/MOD is identified below by a Class number. The list below defines the degree of importance assigned to each Class number:

- Class 1** Safety Tag/MOD which must be made in the field immediately; parts are available.
- Class 2** Tag/MOD made in the field, retroactive on all machines, on next service call.
- Class 3** Repair by replacement Tag/MOD.
- Class 4** Tag/MOD incorporated at discretion of local management or to customer's requirements.
- Class 5** Production only.

Tag/MOD and Classification	Description	Kit and Bulletin Numbers	Factory Install (Listed Serial Number and above)	Field Install (Listed Serial Number and below)
1 R	Thermal head bracket and lower feed out roller changed to correct for printing and feeding problems.	(USO) 499K95724 (RX) 499K95725	(USO) 49K011140 (RX) 59T548734 (XC) 49K060000 (OLV) 57U200001	(USO) 49K011139 (RX) 59T548733 (XC) 49K059999 (OLV) 57U200000
2 R	A2 main PWB changed to level 13. Confidential Send default is on and sending of partial batch is permitted. Corrects for incorrect display when setting up contrast.	140K87879	(USO) 49K013412 (RX) 59T551374 (XC) 49K060660 (OLV) 57U200001	(USO) 49K013411 (RX) 59T551373 (XC) 49K060659 (OLV) 57U200000
3 R	Printer assembly bearing cams changed to eliminate shaft end play.	499K95753	(USO) 49K015272 (RX) 59T554494 (XC) 49K060900 (OLV) 57U200001	(USO) 49K015271 (RX) 59T554493 (XC) 49K060899 (OLV) 57U200000
4 R	Cutter arm change adds spring to correct cutting problem with RX B4 thermal head.	(USO) 31E95701 (RX) 499K95853	(USO) 49K017432 (RX) 59T559474 (XC) 49K062220 (OLV) 57U200421	(USO) 49K017431 (RX) 59T559473 (XC) 49K062219 (OLV) 57U200420

Table 1 Change Tag/MOD Index



## Change Tag/MOD Index (continued)

Tag/MOD and Classification	Description	Kit and Bulletin Numbers	Factory Install (Listed Serial Number and above)	Field Install (Listed Serial Number and below)
5 R	New nudger clutch (5K95600) corrects latching problem on newly installed clutches.	5K95600	(USO) 49K017192 (RX) 59T558154 (XC) 49K061260 (OLV) 57U200181	(USO) 49K017191 (RX) 59T558153 (XC) 49K061259 (OLV) 57U200180
6 R	A1 Main PWB (USO/RX/XC: 140K75480; OLV: 140K75501) change to correct noise from speaker as terminal comes up to full power.	(See Description)	(USO) 49K017192 (RX) 59T559414 (XC) 49K061260 (OLV) 57U200301	(USO) 49K017191 (RX) 59T559413 (XC) 49K061259 (OLV) 57U200300
(RX) 50	Various improvements to meet RX requirements. Level 16 firmware.	140K89941	TBD	TBD

Table 1 Change Tag/MOD Index (continued)

## Firmware Matrix

Table 2 indicates the level of firmware for each A2, A10, and A8 PWB. Chip location is shown in parentheses after the listed PWB.

Main PWB/Coupler PWB/S&F PWB part number	TAG/MOD	Firmware Stage	A2 Main PWB (KSP)	A2 Main PWB (KM1)	A2 Main PWB (KM2)	A10 Coupler PWB (KCP)	A8 Store & Forward PWB (KS1)	A8 Store & Forward PWB (KS2)
140K87878	Production	(USO) 11 (RX) 12	02.00	X01.09	X01.09			
140K87879	2	13	02.00	X01.10	X01.10			
140K89941	(RX) 50	16	02.00	X01.14	X01.13			
140K87946	Production	7				X01.07		
140K89910	Third Production Lot	8				X01.08		
140K87882 / 73K97960	Production	3					01.02	01.02

Table 2 Telecopier 7017 / 7017SF Firmware Matrix

## Change Tag/MOD Index (continued)

Tag/MOD and Classification	Description	Kit and Bulletin Numbers	Factory Install (Listed Serial Number and above)	Field Install (Listed Serial Number and below)
5 R	New nudger clutch (5K95600) corrects latching problem on newly installed clutches.	5K95600	(USO) 49K017192 (RX) 59T558154 (XC) 49K061260 (OLV) 57U200181	(USO) 49K017191 (RX) 59T558153 (XC) 49K061259 (OLV) 57U200180
6 R	A1 Main PWB (USO/RX/XC: 140K75480; OLV: 140K75501) change to correct noise from speaker as terminal comes up to full power.	(See Description)	(USO) 49K017192 (RX) 59T559414 (XC) 49K061260 (OLV) 57U200301	(USO) 49K017191 (RX) 59T559413 (XC) 49K061259 (OLV) 57U200300
(RX) 50	Various improvements to meet RX requirements. Level 16 firmware.	140K89941	TBD	TBD

Table 1 Change Tag/MOD Index (continued)

## Firmware Matrix

Table 2 indicates the level of firmware for each A2, A10, and A8 PWB. Chip location is shown in parentheses after the listed PWB.

Main PWB/Coupler PWB/S&F PWB part number	TAG/MOD	Firmware Stage	A2 Main PWB (KSP)	A2 Main PWB (KM1)	A2 Main PWB (KM2)	A10 Coupler PWB (KCP)	A8 Store & Forward PWB (KS1)	A8 Store & Forward PWB (KS2)
140K87878	Production	(USO) 11 (RX) 12	02.00	X01.09	X01.09			
140K87879	2	13	02.00	X01.10	X01.10			
140K89941	(RX) 50	16	02.00	X01.14	X01.13			
140K87946	Production	7				X01.07		
140K89910	Third Production Lot	8				X01.08		
140K87882 / 73K97960	Production	3					01.02	01.02

Table 2 Telecopier 7017 / 7017SF Firmware Matrix

## System Tests and Information

This section of the manual contains general procedures and information, system test procedures and test procedures contained within the software of the terminal. To ensure accurate testing and prevent loss of system data, read each procedure carefully.

### Service Mode

*NOTE: Each time power is removed, Service Mode must be entered again.*

#### USO: To Enter Service Mode

1. Press Menu.
2. Press \* on the key pad three times.
3. Press Stop.
4. Top line of display blinks to indicate terminal is in Service Mode.

#### RX: To Enter Service Mode

1. Remove power cord.
2. Remove the coupler cover.
3. Position A10 SW 1 bit 4 to the "ON" position.
4. Reinstall power cord.
5. Top line of display blinks to indicate terminal is in Service Mode.

#### USO: To Exit Service Mode

1. Press Menu.
2. Press \* on the key pad three times.
3. Press Stop.

#### RX: To Exit Service Mode

1. Remove power cord.
2. Position A10 SW 1 bit 4 to the "OFF" position.
3. Reinstall the coupler cover.
4. Reinstall power cord.

### Service Mode Options Report

To obtain a Service Mode Options Report:

1. Enter Service Mode.
2. Press the Menu button.
3. Press 2 twice on the keypad.
4. Press Start.
5. The Service Mode Options Report will print out.

*NOTE: The Service Mode Options Report is a record of the current system data configuration and all option settings configured by the Customer. The Service Mode Options Report must be obtained whenever System Data is to be reconfigured.*

### Diagnostics

This test completes a series of diagnostic routines throughout the terminal in order to isolate a faulty assembly. When implemented in normal mode, a customer error message will be displayed directing them to the Operator Manual for assistance if a faulty assembly is isolated.

When an error code is displayed, the diagnostic routine will halt at that code. The remaining diagnostic routines may be completed by pressing the Start button.

#### To start the test.

1. Enter Service Mode.
2. Select Menu 24.
3. Press the Start button.

The diagnostic routines will begin to run. If no errors occur, a diagnostic test pattern will be printed. After the print out occurs, the terminal will return to standby. The diagnostic routines may be stopped at any time by pressing the Stop button.

### Electrostatic Discharge Precautions

Observe the following precautions when handling the Thermal Head and/or Printed Wiring Boards (PWB).

- Before handling any PWB and/or Thermal Head, ground yourself to an earth or building ground. Use a key or paper clip in your hand to transfer the charge from you to ground. Do this every few minutes for prolonged work on PWBs.
- Keep PWBs in the antistatic bags or original packaging until ready to install them.
- Return or store PWBs in the original packaging including antistatic bags.
- When handling PWBs, handle them by the edges.
- Keep the Thermal Head in the protective bag or original packaging until ready for installation. When installing the Thermal Head, handle it by the brackets.
- When handling integrated circuit chips, handle them only by the body and never by the leads (legs). If available, keep them in antistatic foam until ready to install.
- Never place PWBs, integrated circuit chips or components on a metal surface.

## Test Group B, Pattern Prints

When activated, this test causes a continuous printing of the diagnostic test pattern.

### To start the test.

1. Enter Service Mode.
2. Select Menu 61.
3. Press the Start button.

The test pattern will continue to print until the Stop button is pressed.

## Test Group B, Protocol Monitor Print

Protocol Monitor is a facility to monitor and provide a print out of the protocol sequence of a given transaction in any compatible mode.

### To print the trace.

1. Enter Service Mode.
2. Select Menu 62.
3. Press the Start button.

The protocol print will be printed and the terminal will return to standby. If protocol information is not available, a code of OP06 will be displayed when the Start button is pressed.

The following is a list of Protocol commands and their appropriate responses. Commands in bold are ECM commands. Commands with an asterisk are ECM and normal G3 commands. Commands within parenthesis are optional.

Command	Response
(NSF) (CSI) DIS	(NSC) (CIG) DTC (TSI) DCS (NSF) (CSI) DIS (CRP) (TSI) (NSS)
(NSC) (CIG) DTC	(TSI) DCS (NSF) (CSI) DIS (CRP) (TSI) (NSS)

Trace Commands and appropriate responses

Command	Response
(TSI) DCS (TSI) (NSS)	CFR FTT (NSC) (CIG) DTC (NSF) (CSI) DIS (CRP)
<b>(CTC)</b>	<b>(CTR) (CRP)*</b>
<b>(EOR-NULL)</b>	<b>(ERR) (RNR) (CRP) *</b>
<b>(EOR-MPS)</b> or <b>(EOR-EOP)</b> or <b>(EOR-EOM)</b> or <b>(EOR-PRI-MPS)</b> or <b>(EOR-PRI-EOP)</b> or <b>(EOR-PRI-EOM)</b>	<b>(ERR)</b> <b>(RNR)</b> <b>PIN</b> <b>(CRP)</b>
<b>MPS</b> or <b>EOP</b> or <b>EOM</b> <b>(PRI-MPS)*</b> or <b>(PRI-EOP)*</b> or <b>(PRI-EOM)*</b>	<b>MCF*</b> <b>RTP*</b> <b>RTN*</b> <b>PIP*</b> <b>PIN*</b> <b>(CRP)*</b>
<b>(PPS-NULL)</b>	<b>(PPR)</b> <b>MCF*</b> <b>(RNR)</b> <b>(CRP)*</b>
<b>(PPS-MPS)</b> or <b>(PPS-EOP)</b> or <b>(PPS-EOM)</b> or <b>(PPS-PRI-MPS)</b> or <b>(PPS-PRI-EOP)</b> or <b>(PPS-PRI-EOM)</b> or	<b>(PPR)</b> <b>MCF*</b> <b>(RNR)</b> <b>PIP*</b> <b>PIN*</b> <b>(CRP)*</b>
<b>(RR)</b>	<b>(RNR)</b> <b>(ERR)</b> <b>MCF*</b> <b>PIP*</b> <b>PIN*</b> <b>(CRP)*</b>
DCN	None

### Test Group B, Record Paper Feed Test

This test will exercise the paper feed system by feeding paper through the terminal.

*Note: Do not perform this test without paper.*

#### To start the test.

1. Enter Service Mode.
2. Select Menu 71.
3. Press the Start button.

The feeder will continue to feed paper in individual sheets 4 or 5 inches long until the Stop button is pressed. This will terminate the test.

### Test Group B, Original Feed Test

This facility will test the ADF and the Upper Scanner drive mechanisms/document path.

#### To start the test.

1. Enter Service Mode.
2. Place a stack of originals in the ADF.
3. Select Menu 72.
4. Press the Start button.

This test will continue to run as long as there are originals in the ADF. After all documents are fed, pressing the Stop button will terminate the test.

### Test Group B, Printer Motor Test

This test will exercise the Printer Motor and drive mechanism.

*Note: Do not perform this test without paper.*

#### To start the test.

1. Enter Service Mode.
2. Select Menu 73.
3. Press the Start button.

Paper will feed out, uncut, continuously.

Press the Stop button to end the test.

## Test Group B, Scanner Motor Test

This test will cycle the ADF, the Upper Scanner mechanism and Scanner Motor.

### To start the test.

1. Enter Service Mode.
2. Select Menu 74 .
3. Press the Start button.

The ADF belt, and Scanner Motor will cycle. Press The Stop button to stop the test.

## Test Group B, LED Array Test

This test allows for visual inspection of the LED ARRAY (part of the video assembly) element illumination.

### To start the test.

1. Enter Service Mode.
2. Select Menu 75.
3. Press the Start button.

Raise the Upper Scanner Assembly and observe the illuminated (fluorescent yellow-green) elements.

Close the Upper Scanner to terminate test.

## Test Group B, Sensor Test

The Sensor test occurs once each time the terminal has power applied. It will display all the sensors in their static state. This allows the Service Representative to visually see the state (High or Low) of each individual sensor as it is actuated. The test may be used in send, receive, copy or manual mode.

### To start the test.

1. Enter Service Mode.
2. Select Menu 76.
3. Press the Start button.

The Display will indicate the following:

SC	PC	DS	B4	A4	PJ	CP	SP	LP	4P	R	H	F
L	L	L	L	H	L	H	H	H	L	H	H	

The control panel will display the sensor name and the present state (**H**igh or **L**ow) "L" indicates the switch is actuated and "H" indicates the switch is deactuated.

SC	L	Scan Interlock Switch
PC	L	Printer Interlock Switch
DS	L	Document Sensor
B4	L	Wide Original Sensor
A4	H	A4 Document Sensor (FX)
PJ	L	Printer Jam Sensor
CP	H	Cutter Switch
SP	H	Scan Position Sensor
LP	H	Low Paper Sensor
4P	L	Wide Paper Sensor (FX, RX)
R	H	Ring Indicator
H	H	Hook Signal
F		Fax Net Ring Indicator (FX)

5. Actuate the sensor involved to determine it's condition.
6. To Stop test. and remain in service mode.
  - a. Press the Menu button.
  - b. Press the Asterisk button three time.
  - c. Press the stop button.

## Test Group B, Frequency Test

This test will enable the sending of a selected single frequency tone to a remote location.

### To start the test.

1. Establish telephone contact with the remote location.
2. Select Menu 77.
3. Press the Start button.
4. Select the Frequency for test using the Scroll button.

Press the Stop button to end the transmission of the tone. The phone line connection will terminate.

Frequencies available for selection:

0 HZ  
462 HZ  
1004 HZ  
1100 HZ  
1650 HZ  
1850HZ  
2100 HZ  
V29.26  
V29.72  
V27.48  
V27.24  
G2 WHITE/BLACK CARRIER

## Test Group B, Touch Tone Test

This test checks the integrity of the DTMF generator and detector circuits.

### To start the test.

1. Select Menu 78.
2. Press the Start button.
3. Press the Scroll button repeatedly to cycle through the individual frequencies.
4. Continue to press the Scroll button repeatedly to cycle through number frequencies.

Press the Stop button to terminate the test.

Available Touch Tone Frequencies.

697HZ  
770HZ  
770HZ  
852HZ  
941HZ  
1209HZ  
1336HZ  
1477HZ  
1633HZ  
"0"  
"1"  
"2"  
"3"  
"4"  
"5"  
"6"  
"7"  
"8"  
"9"  
"\*"  
"#"  
"A"  
"B"  
"C"  
"D"

## Test Group C, System Data Setup

Refer to "System Data Setup."

## Test Group C, Ram Clear

This menu selection will allow you to clear ALL RAM (Random Access Memory) or clear just the system RAM (PROGRAM) leaving the customer selected information intact, including the Dial Directory.

### *Caution:*

*Read the entire procedure before clearing RAM.*

### To start the test.

1. Select Menu 82.

The following display will appear.

82	RAM CLEAR
PRESS (START) OF (SCROLL)	

2. Press the Start button.

The following display will appear.

CAUTION: THIS WILL CLEAR ALL SYSTEM DATA	
PRESS (START) OF (STOP)	

2. Press the Start button.

The following display will appear.

82	RAM CLEAR	>ALL
PRESS (SELECT) TO CHANGE THEN ENTER		

3. Press the Select button to change to **PROGRAM**.

The following display will appear.

82	RAM CLEAR	>PROGRAM
PRESS (SELECT) TO CHANGE THEN ENTER		

4. Press the Enter button.

This will clear all system RAM leaving the customer programmed information in memory.

## Test Group C, Counters Reset

This test will allow you to reset the following scanning and recording counters listed in the Options Report: All counters (Operation and Malfunction), Operation or Malfunction.

### To start the test.

1. Obtain an Options Report
2. Select Menu 83.

The following display will appear.

82	COUNTERS RESET
PRESS (START) OF (SCROLL)	

3. Press the Start button.

The following display will appear.

COUNTERS RESET >ALL	
PRESS (SELECT) TO CHANGE THEN ENTER	

4. Press the Select button to select counter you wish to reset (ALL, OPERATION OR MALFUNCTION).

The following display will appear.

82	COUNTERS RESET ALL
COMPLETE	

5. Press the Stop button, or allow time out.
6. Obtain a final Options Report to verify test.



## Test Group C, Service Diagnostics

This menu selection will allow you to select 32 specific diagnostic tests.

### To start the test.

1. Select Menu 84
2. Enter a two digit diagnostic code.
3. Press the Start button.

### Two digit diagnostic codes.

00	Continuous Diagnostics
01	Not Used
02	8279 Device
03	8255-A Device
04	8266-B Device
05	Not Used
06	8255-D Device
07	8255-E Device
08	8254-A Device
09	8254-B Device
10	RTC Device
11	CTC Device
12	SIO Device
13	Not Used
14	D.P. RAM
15	M68000 ROM/RAM
16	M68000 8255 Device
17	M68000 D.P. RAM
18	M68000 D RAM
19	M68000 DMA
20	M68000 IDP
21	M68000 CG

### Two digit diagnostic codes.

22	M68000 SP Interface
23	SP ROM/RAM
24	SP Port
25	Not Used
26	Not Used
27	Modem Initial
28	Modem Loop B
29	Not Used
30	Not Used
31	Coupler Read F/W Vir.
32	Coupler Self
33	Coupler Loop C #1
34	Coupler Loop C #2
35	Scanner White/Black
36	Not Used
37	Not Used
38	Not Used
39	Option D.P. RAM
40	S/F Option ROM/RAM
41	S/F Option D.P. RAM
42	S/F Diagnostics

### Special Facility Menu, G3 Send Speed

This facility allows the permanent setting of the fastest group 3 transmit speed.

#### To start this facility.

1. Select Menu 91.
2. Select the desired speed.
3. Press the Enter button. The terminal will return to standby.

Available speeds:

9600 bps  
7200 bps  
4800 bps  
2400 bps

### Special Facility Menu, G3 Rec Speed

This facility allows the permanent setting of the fastest group 3 receive speed.

#### To start this facility.

1. Select Menu 92.
2. Select the desired speed.
3. Press the Enter button. The terminal will return to standby.

Available speeds:

9600 bps  
7200 bps  
4800 bps  
2400 bps

### Special Facility Menu, Comm Mode

This facility allows the permanent setting of the transmitting and receiving modes.

#### To start this facility.

1. Select Menu 93.
2. Select the desired mode.
3. Press the Enter button. The terminal will return to standby.

Available modes:

AUTO  
G3-STD  
G2

## Special Facility Menu, Protocol Monitor

This facility allows the permanent setting of the Protocol Monitor.

### To start this facility.

1. Select Menu 94.
2. Select the desired mode.
3. Press the Enter button. The terminal will return to standby.

Available modes:

- |        |  |
|--------|--|
| Demand | Print out will be on demand when service menu 62 is selected. The report will reflect the preceding operation. |
| Errors | A Protocol Monitor will print out upon detection of an error.  |
| Always | A Protocol Monitor will print out automatically after every operation.   |

## Glossary of Mnemonics

ABC	Abandon Call
CABS1	Cable equalizer selection = 1.8KHz
CABS2	Cable equalizer selection = 3.6KHz
CDG	Completed (Dial) DTMF Generation
CED	Called Station Identification
CFR	Confirmation to Receive
CIG	Calling Subscriber Identification
CIL	Call Indicator Low
CLI	Signal Collision Indication
CNG	Calling Tone
CNT	Connect Telephone Line to Modem
CRP	Command Repeat
CSI	Called Subscriber Identification
CTC	Continue to correct
CTR	Response to CTC
DAG	Request Diagnosis
DCN	Disconnect
DCS	Digital Command Signal
DE6	1650 Hz. Signal Detection
DE8	1850 Hz. Signal Detection
DIS	Digital Identification Signal
DTC	Digital Transmit Command
DTMF	Dual Tone Multiple Frequency
EOD	End of Dialed Data
EOM	End of Message
EOP	End of Procedure
EOR	End of of Retransmission
EOR-NULL	Indicate the next block transmission
ERR	Respond to EOR
EQM	Line Quality
FCD	Facsimile coded data
FCF	Facsimile Control Field
FCS	Frame checking sequence
FIF	Facsimile Information Field
FTT	Fail To Train
GC	Group Command
GI	Group Identification
HDLC	High Level Data Link Control
ICN	Telephone Line connected to Modem
IGD	Self check Indication "Good"
IL1	Loop 1 Made
IL2	Loop 2 Made
ING	Self check Indication "No Good"
IOT	Telephone Line Open Indication

IRI	Illegal Instruction
J3L EQL	Japanese 3 Link Equalizer
LCS	Line Conditioning Signal
MF	Mini fax
MH	Modified Huffman
MCF	Message Confirmation
ML1	Make Loop 1
ML2	Make Loop 2 and 1644 Hz. Touch tone Signal Sent.
MPS	Multi-Page Signal
MTF	Modulated Transfer Function
NSC	Non-Standard Facilities Command
NSF	Non-Standard Facilities
NSS	Non-Standard Set-Up
OPT	Open a Telephone Line (initial state)
PHP	Phasing Period
PIN	Procedural Interrupt Negative
PIP	Procedural Interrupt Positive
PIS	Procedure Interrupt Signal
PPR	Partial page request
PPS	Partial page signal
PPS-NULL	Post message command for Partial page signal
PRD	Preparation for Dialing
PRI-EOM	Procedure Interrupt-EOM
PRI-EOP	Procedure Interrupt-EOP
PRI-MPS	Procedure Interrupt-MPS
PST	Prepare to Send Tone
PTN	Send Telephone Number (from Main to Coupler PWB)
RR	Receive ready
RCP	Return to control for partial page
RED	Redial
RGD	Request to Generate DTMF
RNR	Receive not ready
RTN	Retrain Negative
RTP	Retrain Positive
RL EQL	Receive Link Amplitude Equalizer
SLF	Self check
SST	Prepare to Send Single Tone
T2 EQL	Two baud taps Equalizer
TCF	Training Check
TSI	Transmitting Subscriber Identification
TL EQL	Transmit Link Amplitude Equalizer
ZZF	German Configuration 6 Standards

## 7. Wiring Data

### Plug / Jack Locationals

- Plug / Jack Location [7-2](#)
- PWB Designations [7-2](#)
- Figure 1 [7-3](#)
- Figure 2 [7-4](#)
- Figure 3 [7-5](#)

### Wirenets

- Analog Ground [7-6](#)
- Logic Ground [7-7](#)
- High Ground [7-11](#)
- P+5VDC Power Distribution [7-12](#)
- M+5VDC Power Distribution [7-13](#)
- M+12VDC Power Distribution [7-14](#)
- M-12VDC Power Distribution [7-15](#)
- M+15VDC Power Distribution [7-16](#)
- M+24VDC Power Distribution [7-17](#)

### Wire Running List

- P/J 1 (A) A2 Main PWB [7-18](#)
- P/J 1 (B) A2 Main PWB [7-18](#)
- P/J 2 (A) A2 Main PWB [7-18](#)
- P/J 2 (B) A2 Main PWB [7-19](#)
- P/J 3 A10 Coupler PWB [7-19](#)
- P/J 4 A5 Modem PWB [7-19](#)
- P/J (A) A8 Store and Forward PWB [7-20](#)
- P/J (B) A8 Store and Forward PWB [7-20](#)
- P/J 101 Speaker [7-20](#)
- P/J 103 Scan Interlock Switch [7-20](#)
- P/J 104 Scan Motor [7-20](#)
- P/J 106 Wide Original Sensor (W2) [7-20](#)
- P/J 107 Document Sensor (W3) [7-20](#)
- P/J 109 Nudger Solenoid [7-21](#)
- P/J 110 Scan Position Sensor (W4) [7-21](#)

## 7. Wiring Data

- P/J 111 (A) Control Panel [7-21](#)
- P/J 111 (B) Control Panel [7-21](#)
- P/J 112 Printer Interlock Switch [7-21](#)
- P/J 113 Cutter Switch [7-21](#)
- P/J 114 Printer Jam Sensor (W6) [7-21](#)
- P/J 115 Printer Motor [7-21](#)
- P/J 116 Low Paper Sensor (W7) [7-21](#)
- P/J 117 Wide Paper Sensor (W8) [7-21](#)
- P/J 118 Cutter Solenoid [7-21](#)
- P/J 119 Fan [7-21](#)
- P/J 120 Thermal Head (W9) [7-21](#)
- P/J 121 Thermal Head (W10) [7-21](#)
- P/J 123 Video Assembly [7-22](#)
- P/J 124 (A) Power Assembly [7-22](#)
- P/J 124 (B) Power Assembly [7-22](#)
- P/J 201 Video Assembly [7-23](#)
- P/J 202 A-Si Sensor [7-23](#)
- P/J 202 A-Si Sensor [7-23](#)

## Plug/Jack Locationals

### How to use the Plug/jack locationals

Locate the Plug/Jack in the P/J Number column of Table 7-1. Then refer to the Figure/Item column to locate the figure and item number of the Plug/Jack in question.

Some P/J's may be used twice. If you are looking for a P/J and it is listed twice the accessory or component it is used in will be listed in the description column.

### Printed Wiring Board designations

A 0 PWB, CNC.  
A 1 PWB, Video Assembly.  
A 2 PWB, Main.  
A 3 PWB, Telephone Line Filter Assembly.  
A 5 PWB, Modem.  
A 6 PWB, Control Panel Assembly.  
A 8 PWB, Store and Forward Option.  
A10 PWB, Coupler

P/J No.	Description	Figure/Item
J 1	A0 CNC	1
J 2	A0 CNC	1
P 3	A10 COUPLER	2
P 4	A5 MODEM	2
P 6	A8 STORE & FORWARD OPTION	2
J 1	A2 MAIN	2
J 2	A2 MAIN	2
J 3	A2 MAIN	2
J 4	A2 MAIN	2
J 5	A2 MAIN (Not Used)	2
J 6	A2 MAIN	2
J 7	A2 MAIN-TEST (NOT USED)	
P/J101	CNC - MONITOR	1
P/J102	NOT USED	
P/J103	A0 CNC - SCAN INTERLOCK SW.	1
P/J104	A0 CNC - SCAN MOTOR	1
P/J105	A0 CNC - DOC A5 SENSOR	1, 3
P/J106	A0 CNC - WIDE ORIGINAL SENSOR	1, 3
P/J107	A0 CNC - DOCUMENT SENSOR	1, 3

P/J No.	Description	Figure/Item
P/J108	A0 CNC - (NOT USED)	
P/J109	A0 CNC -ADF SOLENOID	1
P/J110	A0 CNC - SCAN POSITION SENSOR	1
P/J111	A0 CNC - CONTROL PANEL	1
P/J112	A0 CNC - PRINTER INTERLOCK SW.	1
P/J113	A0 CNC- CUTTER SENSOR	1
P/J114	A0 CNC - PRINTER JAM SENSOR	1
P/J115	A0 CNC - PRINTER MOTOR	1
P/J116	A0 CNC - LOW PAPER SENSOR	1
P/J117	A0 CNC- WIDE PAPER SENSOR (RX)	1, 3
P/J118	A0 CNC- CUTTER SOLENOID	1
P/J119	A0 CNC - FAN	1
P/J120	A0 CNC- THERMAL HEAD POWER	1
P/J121	A0 CNC THERMAL HEAD SIGNAL	1
P/J122	A0 CNC- NOT USED	
P/J123	A0 CNC - VIDEO ASSEMBLY	1
P/J124	A0 CNC - POWER SUPPLY	1
P/J201	VIDEO ASSEMBLY	3
P/J202	A-SI SENSOR	3
P/J204	A-SI SENSOR	3
P301	THERMAL HEAD	3
P302	THERMAL HEAD	3
J402	WIDE ORIGINAL	3
J403	DOCUMENT SENSOR	3
J405	SCAN POSITION SENSOR	3
J406	JAM SENSOR	3
J408	LOW PAPER SENSOR	3
J409	WIDE PAPER SENSOR	3
P701	TELEPHONE	2
P901	TELEPHONE	2
MJ1	TELEPHONE JACK	2
MJ3	TELEPHONE JACK	2

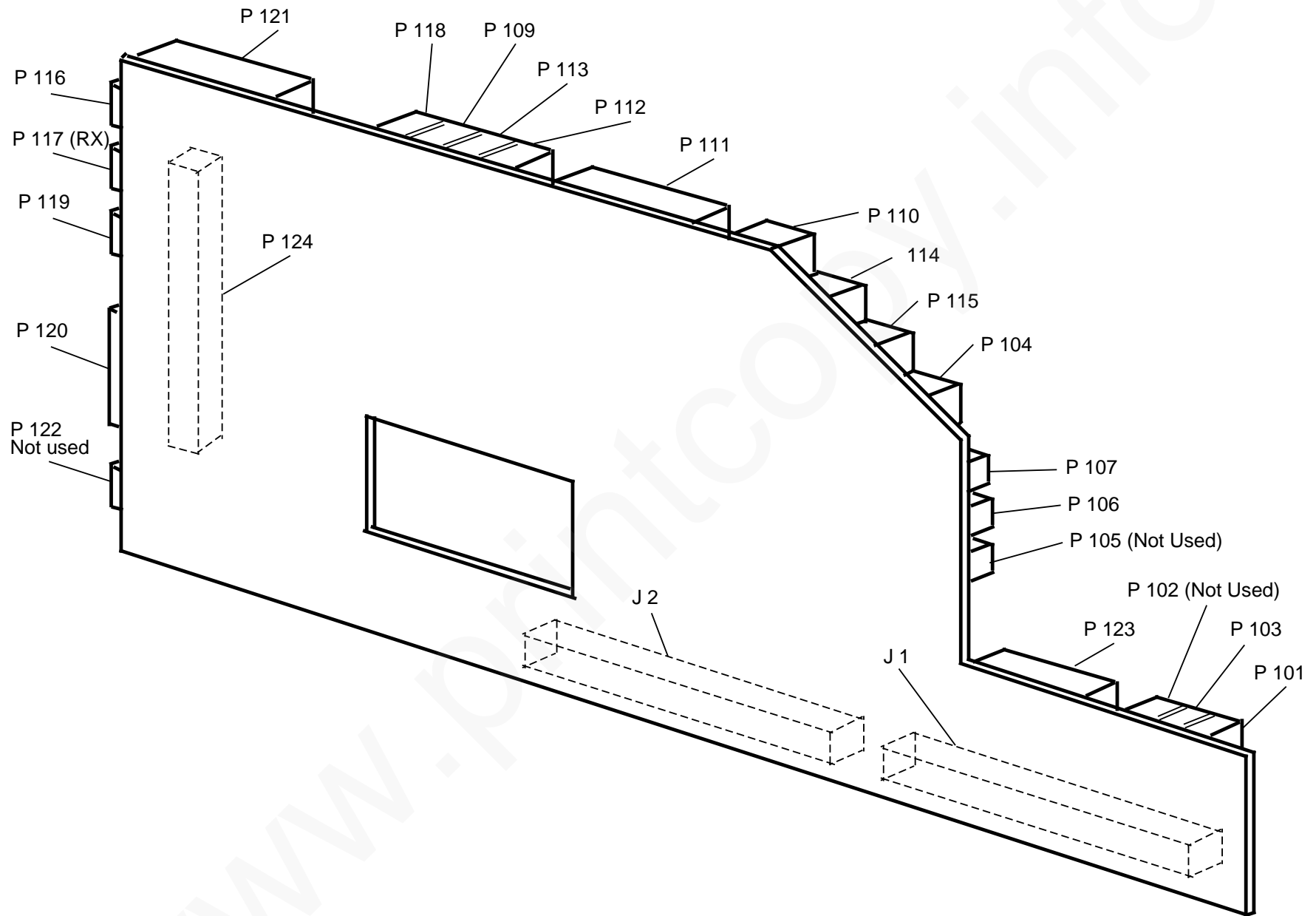
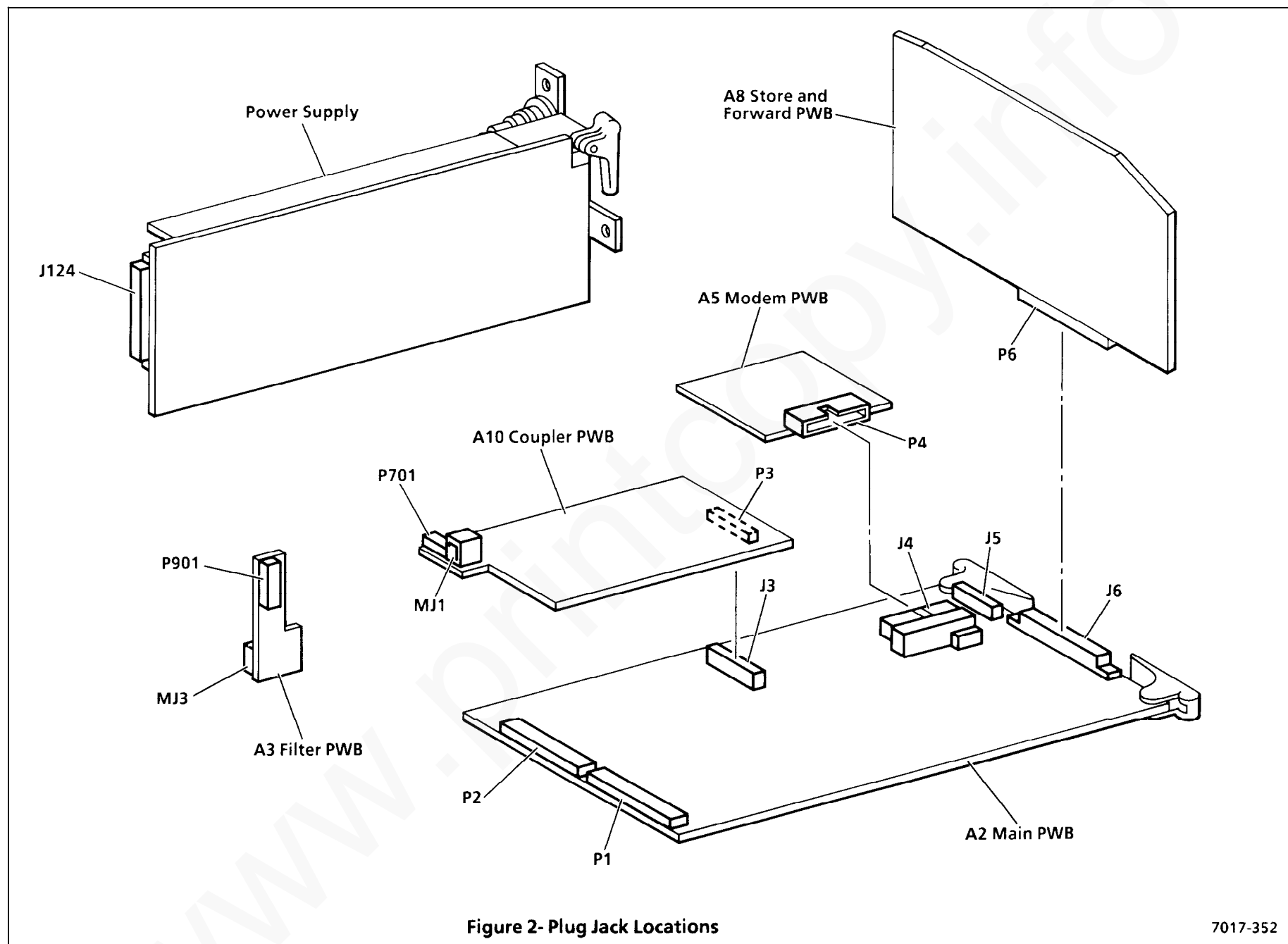
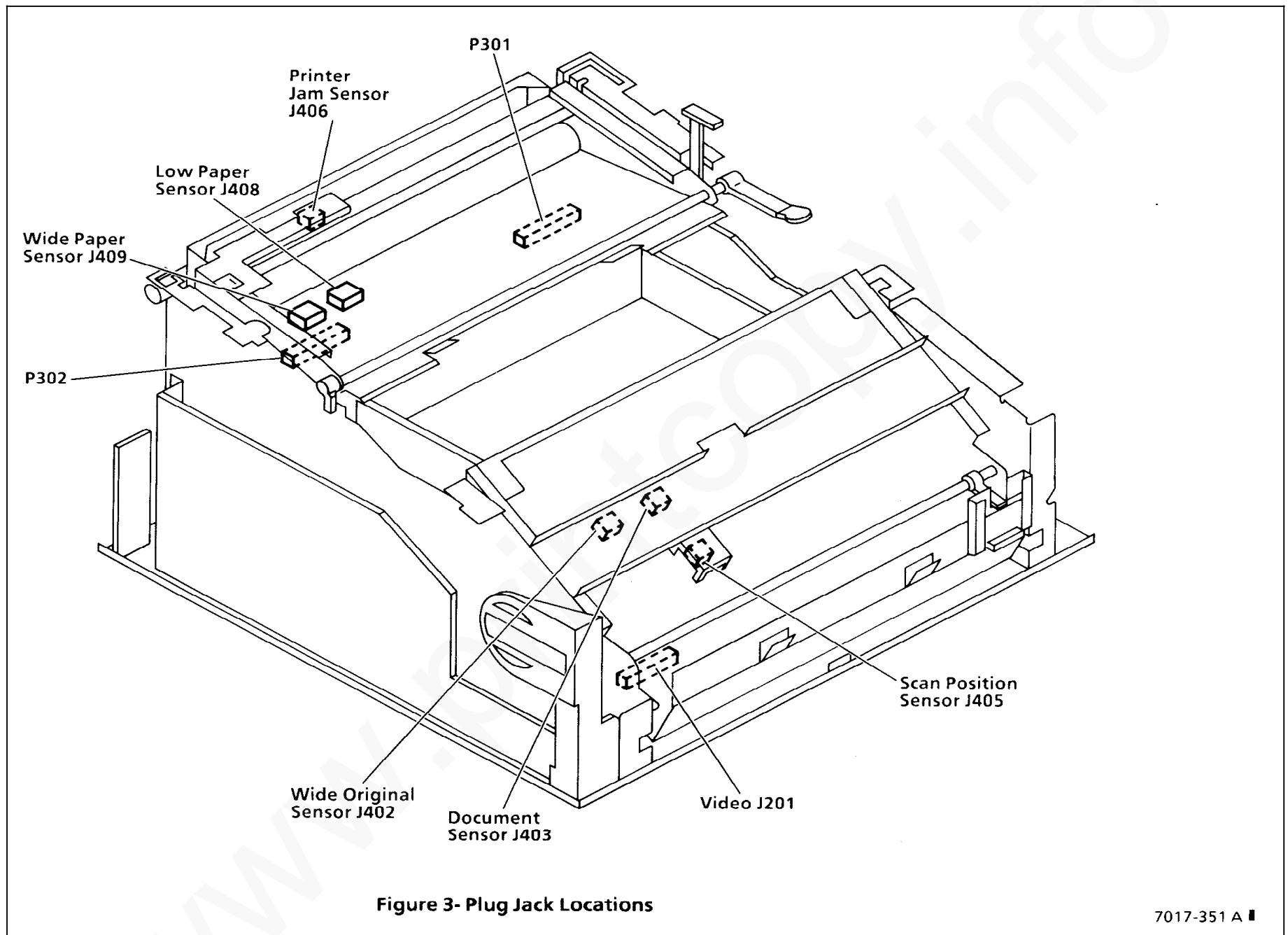


Figure 1- A0 CNC PWB Plug Jack Locations

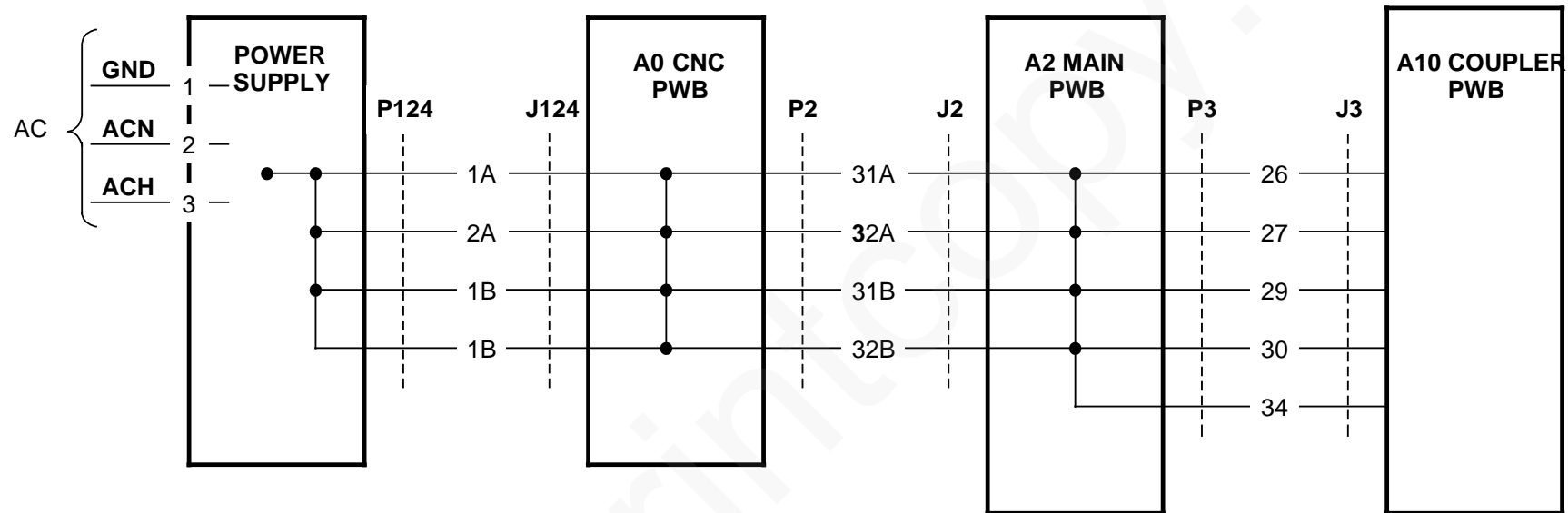
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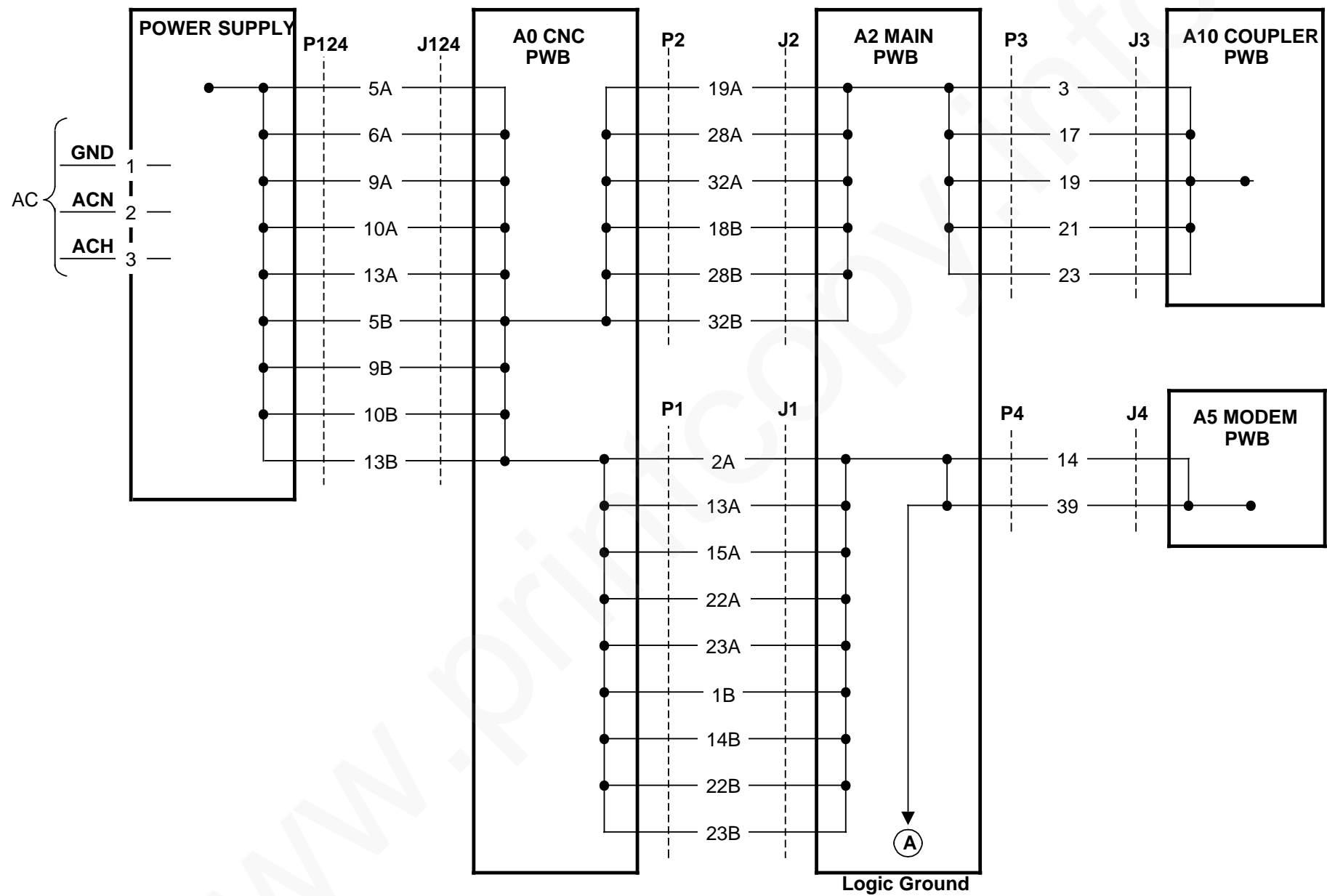




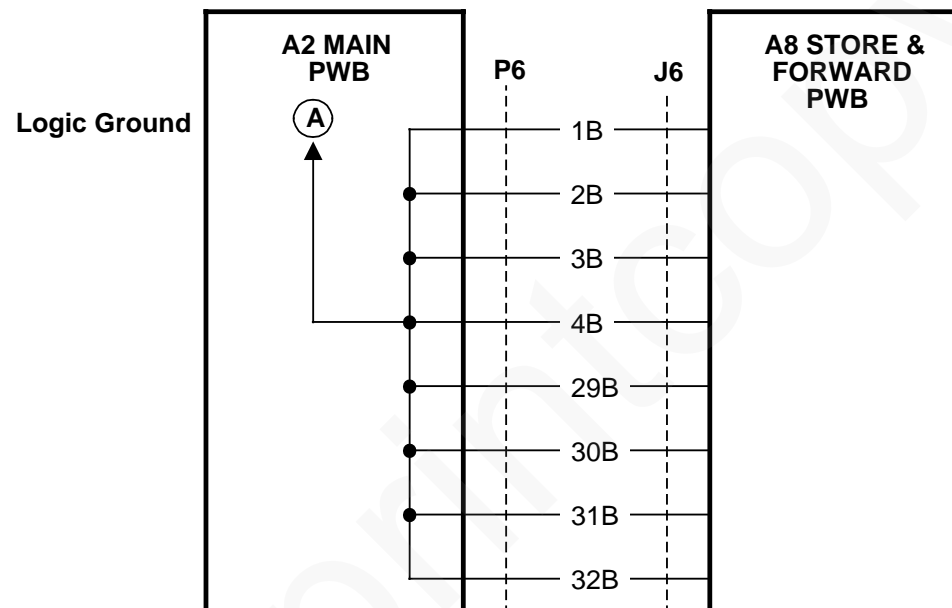
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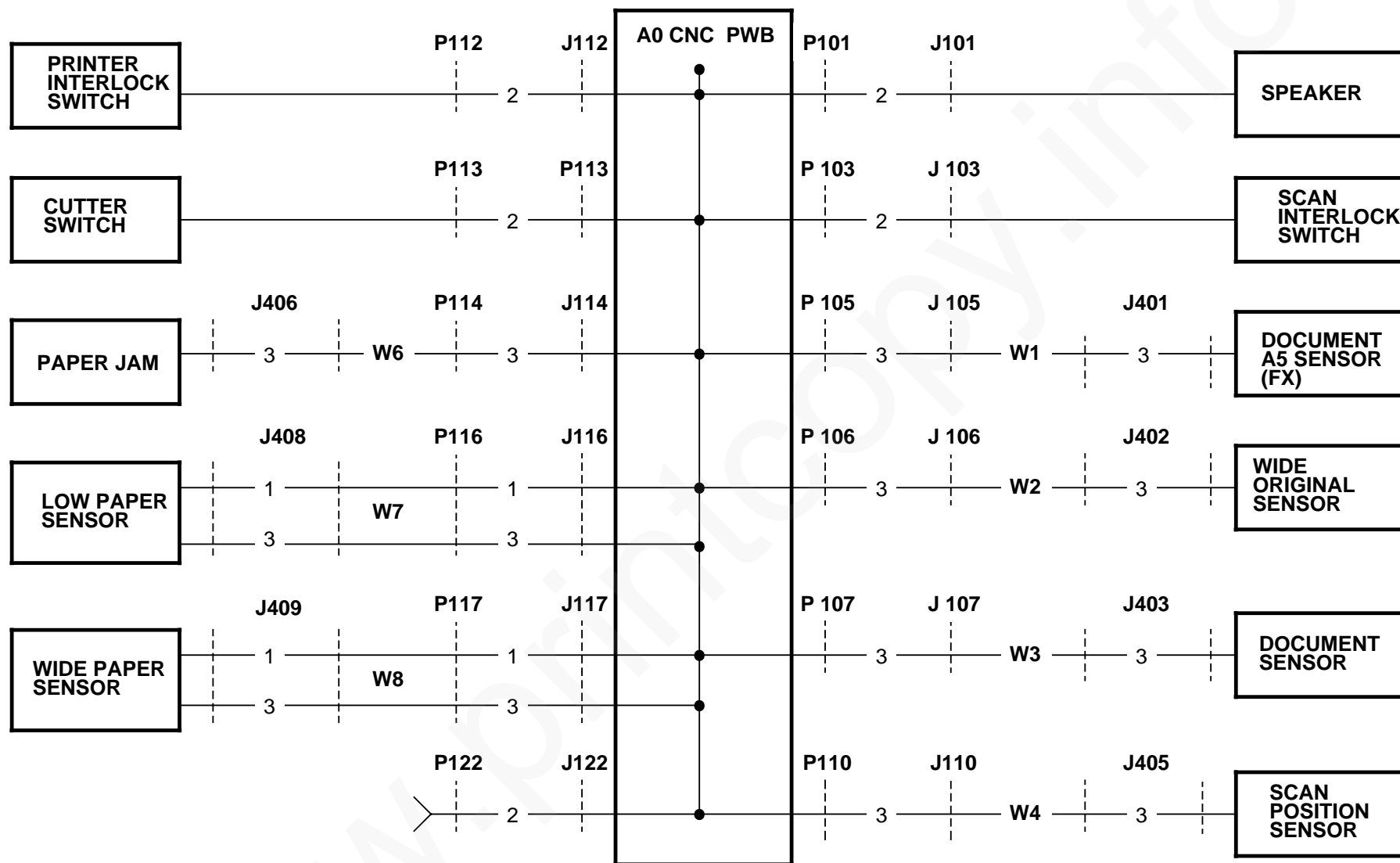
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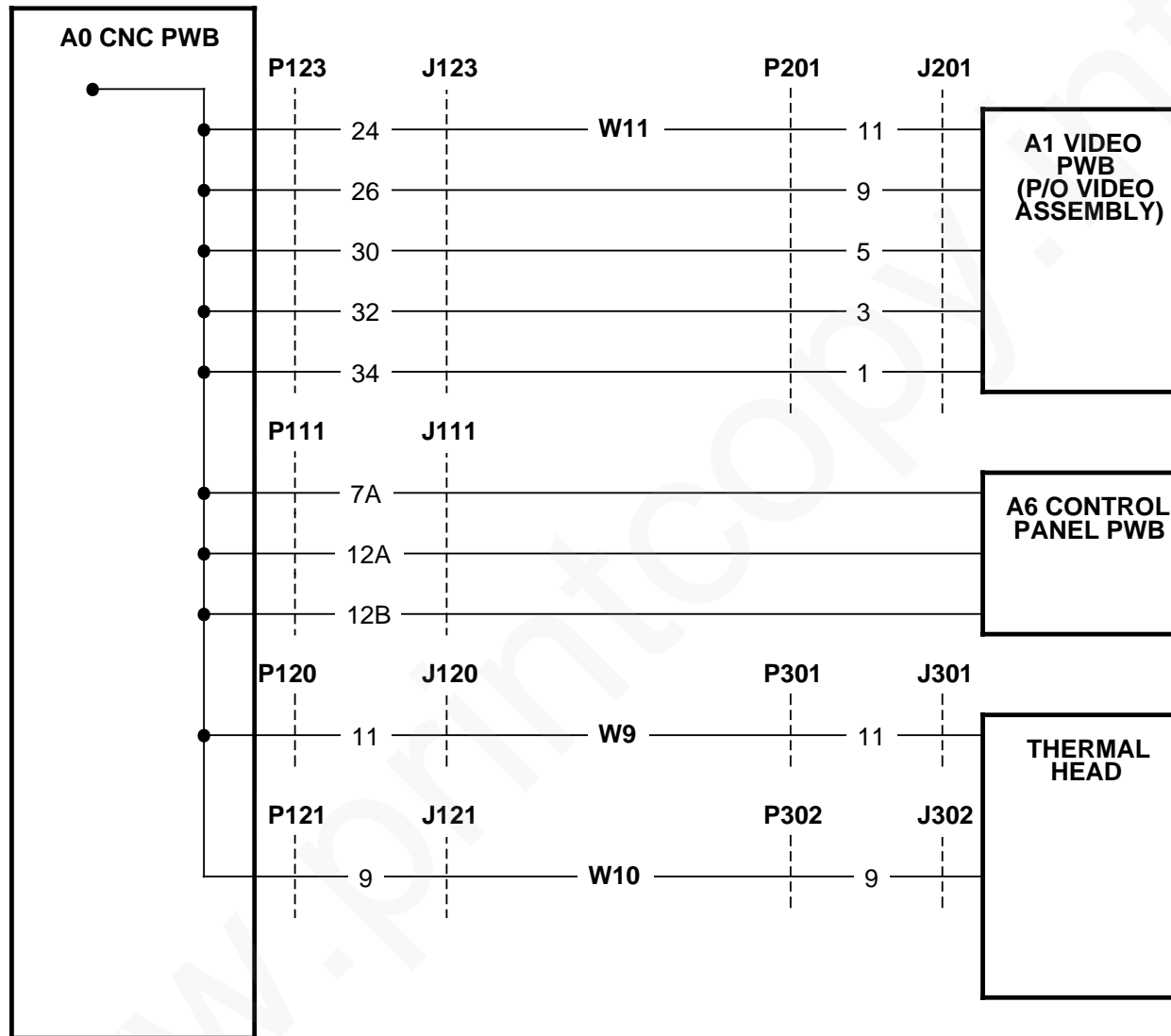
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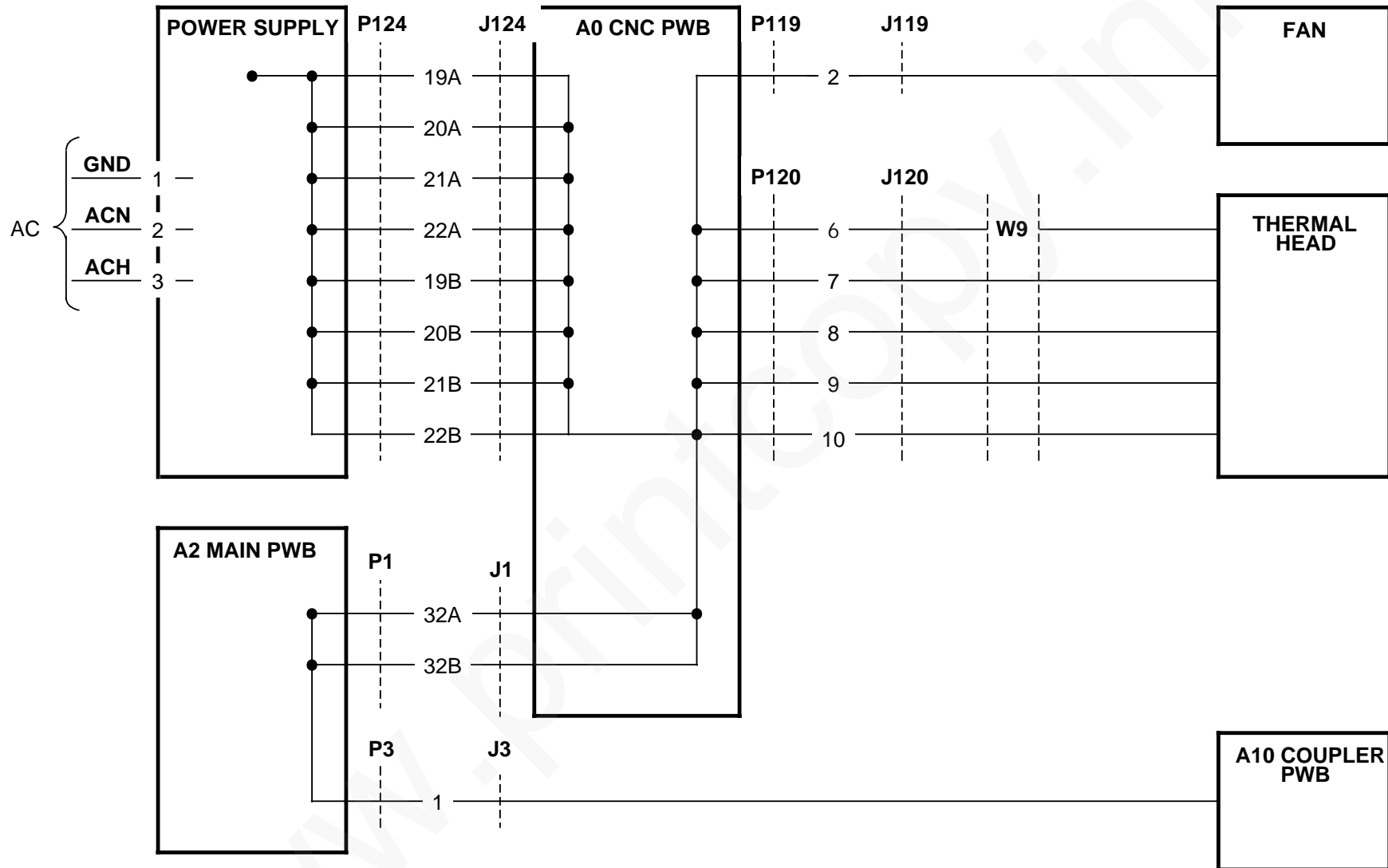
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7017-355 A

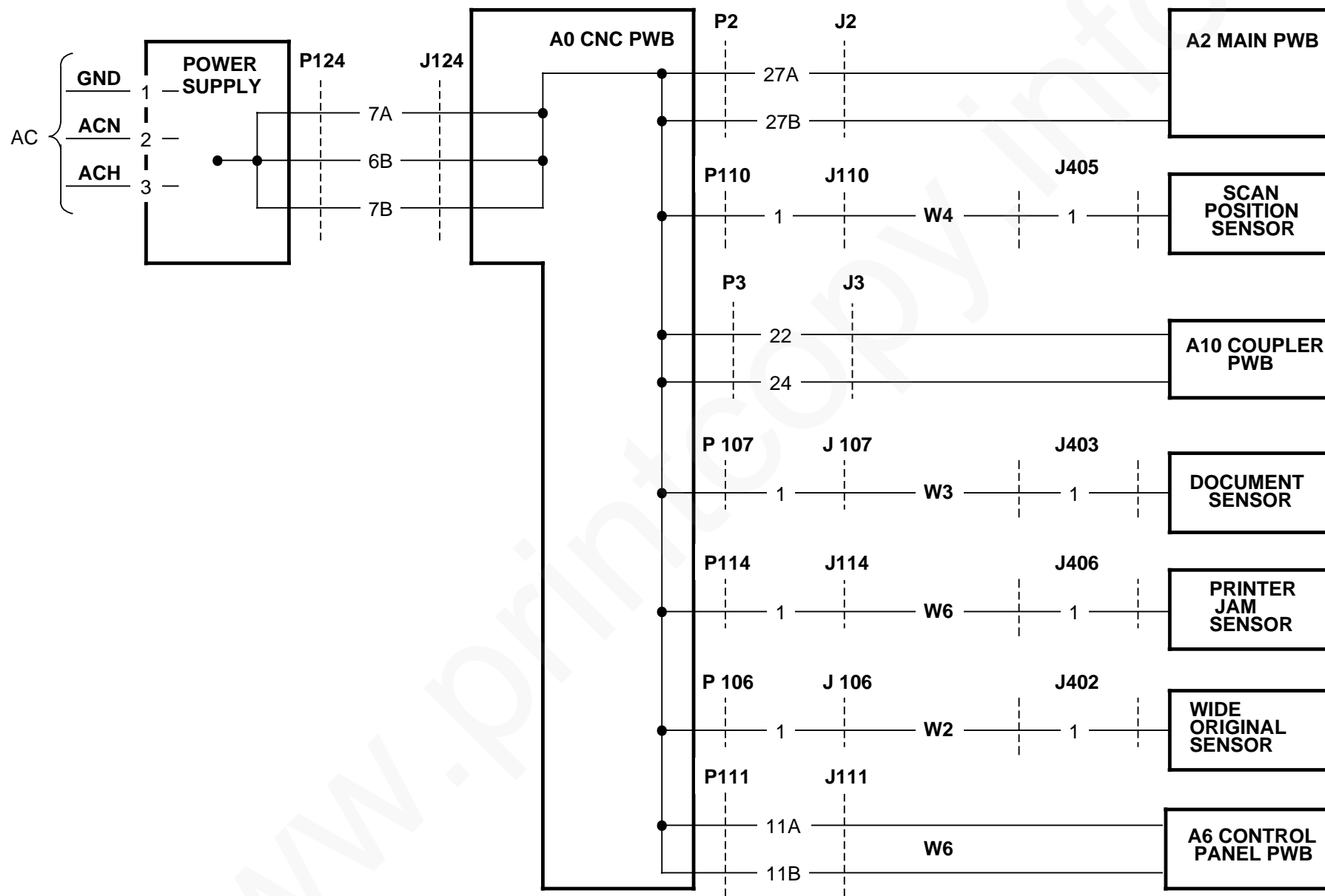


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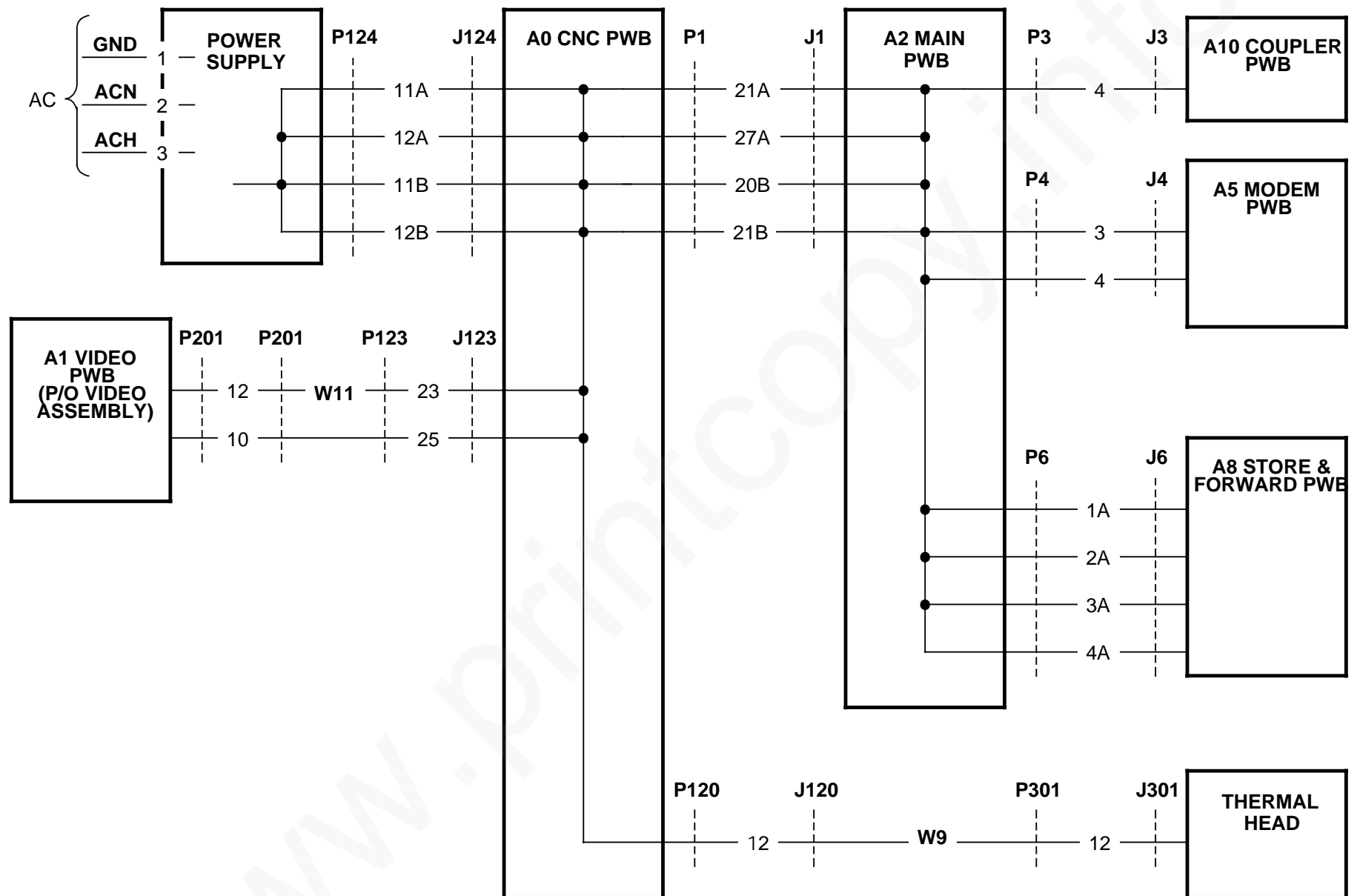


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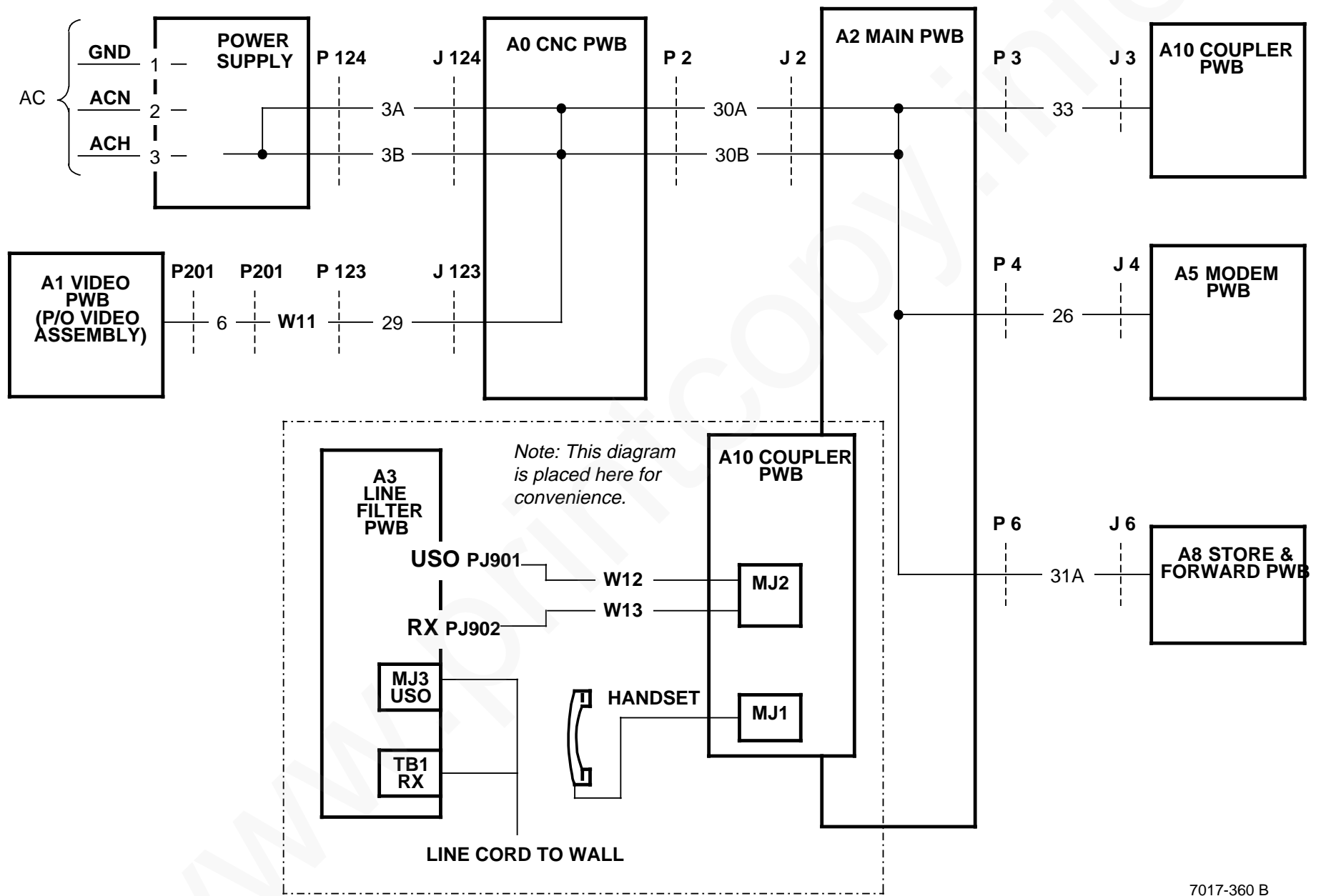




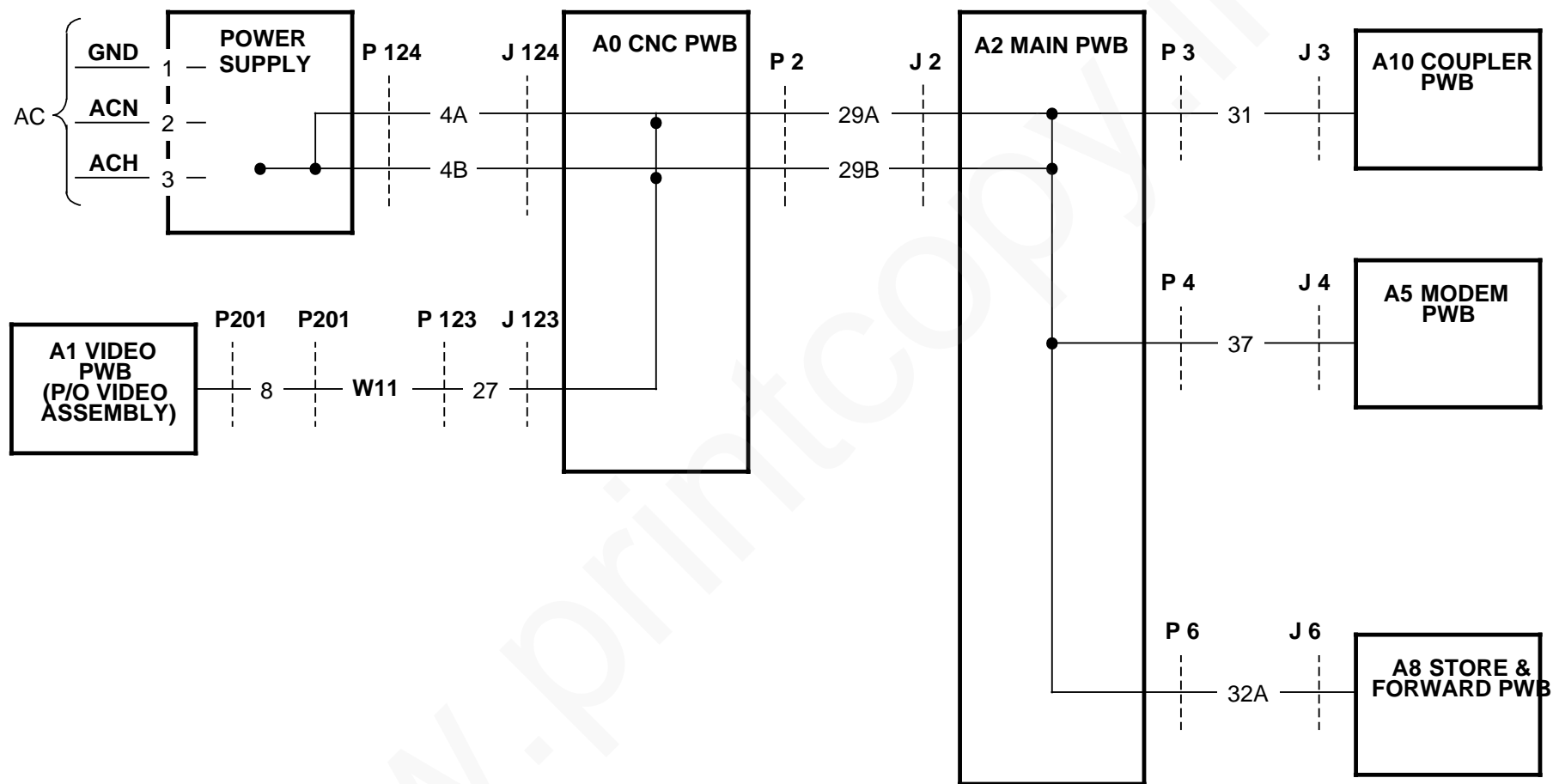
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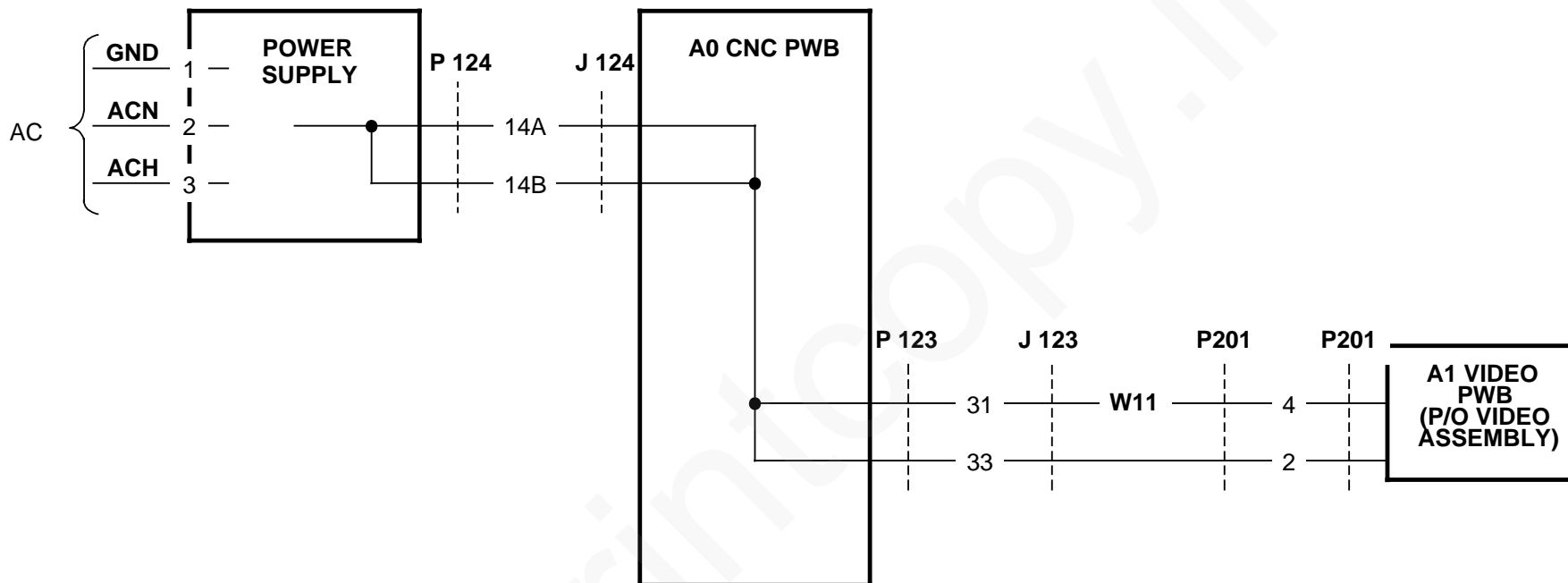
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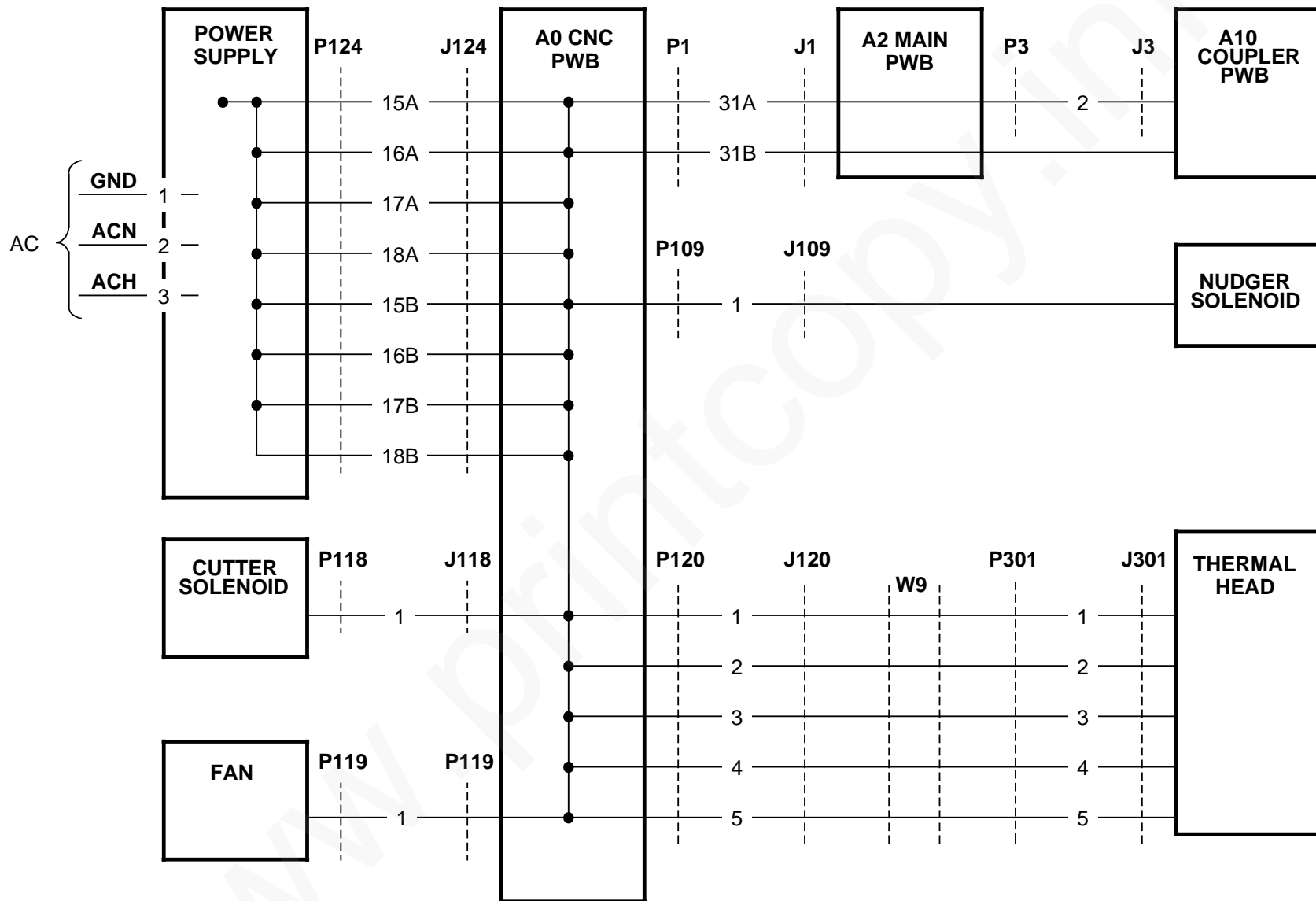
7017-360 B



7017-361A



7017-362A



7017-363

**P/J 1(A) A2 Main PWB**

Pin	From	To	SIGNAL
A1	MAIN	SPEAKER	MONITOR
A2	PSU	MAIN	LGND
A3	MAIN	VP	VDTH4H
A4	MAIN	VP	VDTH2H
A5	MAIN	VP	VDTH0H
A6	MAIN	VP	SCMD2H
A7	MAIN	VP	SCMD0H
A8	MAIN	VP	VDMD0H
A9	MAIN	VP	SDCONL
A10	VP	MAIN	SC5MSL
A11	MAIN	VP	DAKWRL
A12	MAIN	VP	SCDERQL
A13	PSU	MAIN	LGND
A14	VP	MAIN	CLK664
A15	PSU	MAIN	LGND
A16	SENSOR	MAIN	SNSCOH
A17	SENSOR	MAIN	SNDA5L
A18			
A19			
A20	PSU	MAIN	M+5V
A21	PSU	MAIN	M+5V
A22	PSU	MAIN	LGND
A23	PSU	MAIN	LGND
A24			
A25			
A26	MAIN	CUTTER SOL	CUTONL
A27	MAIN	SCN MOTOR	SMTAP
A28	MAIN	SCN MOTOR	SMTBP
A29	MAIN	PTR MOTOR	PMTAP
A30	MAIN	PTR MOTOR	PMTBP
A31	PSU	MAIN	M+24V
A32	PSU	MAIN	HGND

**P/J1 (B) A2 Main PWB**

Pin	From	To	SIGNAL
B1	PSU	MAIN	LGND
B2			
B3	MAIN	VP	VDTH5H
B4	MAIN	VP	VDTH3H
B5	MAIN	VP	VDTH1H
B6	MAIN	VP	SCMD3H
B7	MAIN	VP	SCMD1H
B8	MAIN	VP	VDMD1H
B9	MAIN	VP	VDMD2H
B10	VP	MAIN	SMTRQL
B11	MAIN	VP	SHDWRL
B12	VP	MAIN	SCDENL
B13	VP	MAIN	SCDTBL
B14	PSU	MAIN	LGND
B15	MAIN	VP	LEDONL
B16	SENSOR	MAIN	SNDOCH
B17	SENSOR	MAIN	SNDB4H
B18	SENSOR	MAIN	SNSPOL
B19			
B20	PSU	MAIN	M+5V
B21	PSU	MAIN	M+5V
B22	PSU	MAIN	LGND
B23	PSU	MAIN	LGND
B24			
B25	MAIN	ADF SOL	ADFONL
B26			
B27	MAIN	SCN MOTOR	SMTAN
B28	MAIN	SCN MOTOR	SMTBN
B29	MAIN	PTR MOTOR	PMTAN
B30	MAIN	PTR MOTOR	PMTBN
B31	PSU	MAIN	M+24V
B32	PSU	MAIN	HGND

**P/J 2 (A) A2 Main PWB**

Pin	From	To	SIGNAL
A1	MAIN	PANEL	PND7H
A2	MAIN	PANEL	PND5H
A3	MAIN	PANEL	PND3H
A4	MAIN	PANEL	PND1H
A5	MAIN	PANEL	PDBRDL
A6	MAIN	PANEL	PNA0H
A7	MAIN	PANEL	LCDENL
A8	MAIN	PANEL	PNC254
A9	MAIN	PANEL	PNRDL
A10	MAIN	PANEL	PNRSTL
A11	CNC	MAIN	UNIVIN
A12	SENSOR	MAIN	SNCUT/H
A13			
A14	T/H	MAIN	RCON2S
A15	T/H	MAIN	RCON0S
A16	MAIN	T/H	T/HDTBH
A17	PSU	MAIN	LGND
A18	MAIN	T/H	T/HCLKP
A19	PSU	MAIN	LGND
A20	MAIN	T/H	T/HST2L
A21	MAIN	T/H	T/HST4L
A22	T/H	MAIN	T/HSNSH
A23			
A24	SENSOR	MAIN	SNPAPL
A25			
A26	MAIN	PSU	MPWONL
A27	PSU	MAIN	P+5V
A28	PSU	MAIN	LGND
A29	PSU	MAIN	M-12V
A30	PSU	MAIN	M+12V
A31	PSU	MAIN	AGND
A32	PSU	MAIN	AGND

# **P/J 2 (B) A2 Main PWB**

Pin	From	To	SIGNAL
B1	MAIN	PANEL	PND6H
B2	MAIN	PANEL	PND4H
B3	MAIN	PANEL	PND2H
B4	MAIN	PANEL	PND0H
B5	MAIN	PANEL	PDBWRL
B6	MAIN	PANEL	PNA1H
B7	MAIN	PANEL	PNWRL
B8	MAIN	PANEL	PCSL
B9	PANEL	MAIN	PINTL
B10			
B11	SENSOR	MAIN	SNPCOH
B12	SENSOR	MAIN	SNPJMh
B13			
B14	T/H	MAIN	RCON1S
B15	MAIN	T/H	THRSTL
B16	MAIN	T/H	THLATL
B17			
B18	PSU	MAIN	LGND
B19	MAIN	T/H	THST1L
B20	MAIN	T/H	THST3L
B21	T/H	MAIN	THB4L
B22	T/H	MAIN	THSEL
B23			
B24	SENSOR	MAIN	SNPB4L
B25			
B26			
B27	PSU	MAIN	P+5V
B28	PSU	MAIN	LGND
B29	PSU	MAIN	M-12V
B30	PSU	MAIN	M+12V
B31	PSU	MAIN	AGND
B32	PSU	MAIN	AGND

# **P/J 3 A10 Coupler PWB**

Pin	From	To	SIGNAL
1	PSU	COUPLER	
2	PSU	COUPLER	
3	PSU	COUPLER	
4	PSU	COUPLER	
5	MAIN	COUPLER	
6	MAIN	COUPLER	
7	MAIN	COUPLER	
8	MAIN	COUPLER	
9	MAIN	COUPLER	
10	MAIN	COUPLER	
11	MAIN	COUPLER	
12	MAIN	COUPLER	
13	MAIN	COUPLER	
14	MAIN	COUPLER	
15	MAIN	COUPLER	
16	MAIN	COUPLER	
17	PSU	COUPLER	
18	MAIN	COUPLER	
19	PSU	COUPLER	
20	MAIN	COUPLER	
21	PSU	COUPLER	
22	PSU	COUPLER	
23	PSU	COUPLER	
24	PSU	COUPLER	
25	MAIN	COUPLER	
26	PSU	COUPLER	
27	PSU	COUPLER	
28	MAIN	COUPLER	
29	PSU	COUPLER	
30	PSU	COUPLER	
31	PSU	COUPLER	
32	MAIN	COUPLER	
33	PSU	COUPLER	
34	PSU	COUPLER	

# **P/J 4 A5 Modem PWB**

Pin	From	To	SIGNAL
1	MAIN	MODEM	MDRDH
2	MAIN	MODEM	MDWRL
3	PSU	MODEM	M+5V
4	PSU	MODEM	M+5V
5	MAIN	MODEM	MDD6H
6	MAIN	MODEM	MDCS0L
7	MAIN	MODEM	MDD7H
8	MAIN	MODEM	MDA2H
9	MAIN	MODEM	MDD5H
10	MAIN	MODEM	MDA0H
11	MODEM	MODEM	EYECKN
12	MODEM	MODEM	EYESYC
13	MODEM	MAIN	DCLK
14	PSU	MODEM	LGND
15	MAIN	MODEM	MDD3H
16	MODEM	MAIN	RLSD
17	MODEM	MAIN	CTS
18	MAIN	MODEM	MDCS1L
19	MAIN	MODEM	RTS
20	MAIN	MODEM	TXD
21	MODEM	MAIN	RXD
22	MAIN	MODEM	XCLK
23	MAIN	MODEM	MDD1H
24	MODEM	EYE	EYEX
25	MODEM	EYE	EYEX
26	PSU	MODEM	M+12V
27	MAIN	MODEM	MDA1H
28	MAIN	MODEM	MDD2H
29	MAIN	MODEM	MDD0H
30	MAIN	MODEM	MDA3H
31	MAIN	MODEM	MDD4H
32	MODEM		IRQL
33	MAIN	MODEM	CABS1H
34	MAIN	MODEM	CABS2H
35			
36	MAIN	MODEM	PORL
37	PSU	MODEM	M-12V
38	MODEM	MAIN	TXA
39	PSU	MODEM	LGND
40	MAIN	MODEM	RXA



**P/J 6 (A) A8 Store and Forward PWB**

Pin	From	To	SIGNAL
A1	PSU	OPTION	M+5V
A2	PSU	OPTION	M+5V
A3	PSU	OPTION	M+5V
A4	PSU	OPTION	M+5V
A5			
A6	MAIN	OPTION	OPRSTL
A7	MAIN	OPTION	OPIFEL
A8	MAIN	OPTION	OPUWRL
A9	MAIN	OPTION	OPRDL
A10			
A11	MAIN	OPTION	OPA1H
A12	MAIN	OPTION	OPA3H
A13	MAIN	OPTION	OPA5H
A14	MAIN	OPTION	OPA7H
A15	MAIN	OPTION	OPA9H
A16	MAIN	OPTION	OPA11H
A17			
A18	MAIN	OPTION	OPD1H
A19	MAIN	OPTION	OPD3H
A20	MAIN	OPTION	OPD5H
A21	MAIN	OPTION	OPD7H
A22	MAIN	OPTION	OPD9H
A23	MAIN	OPTION	OPD11H
A24	MAIN	OPTION	OPD13H
A25	MAIN	OPTION	OPD15H
A26			
A27	OPTION	MAIN	CMRQL
A28	MAIN	OPTION	OPMBEL
A29	PSU	OPTION	P+5V
A30	PSU	OPTION	P+5V
A31	PSU	OPTION	M+12V
A32	PSU	OPTION	M-12V

**P/J 6 (B) A8 Store and Forward PWB**

Pin	From	To	SIGNAL
B1	PSU	OPTION	LGND
B2	PSU	OPTION	LGND
B3	PSU	OPTION	LGND
B4	PSU	OPTION	LGND
B5			
B6	OPTION	MAIN	OPINTL
B7	OPTION	MAIN	OPRDYL
B8	MAIN	OPTION	OPLWRL
B9	MAIN	OPTION	OPDTRH
B10	MAIN	OPTION	OPCSL
B11			
B12	SMAIN	OPTION	OPA2H
B13	MAIN	OPTION	OPA4H
B14	MAIN	OPTION	OPA6H
B15	MAIN	OPTION	OPA8H
B16	MAIN	OPTION	OPA10H
B17			
B18	MAIN	OPTION	OPD0H
B19	MAIN	OPTION	OPD2H
B20	MAIN	OPTION	OPD4H
B21	MAIN	OPTION	OPD6H
B22	MAIN	OPTION	OPD8H
B23	MAIN	OPTION	OPD10H
B24	MAIN	OPTION	OPD12H
B25	MAIN	OPTION	OPD14H
B26			
B27	OPTION	MAIN	OPN1L
B28	OPTION	MAIN	OPN0L
B29	PSU	OPTION	LGND
B30	PSU	OPTION	LGND
B31	PSU	OPTION	LGND
B32	PSU	OPTION	LGND

**P/J 101 Speaker**

Pin	From	To	SIGNAL
1	MAIN	SPEAKER	MONITOR
2	PSU	SPEAKER	LGND

**P/J 103 Scan Interlock Switch**

Pin	From	To	SIGNAL
1	SENSOR	MAIN	SNSCOH
2	PSU	SENSOR	LGND

**P/J 104 Scan Motor**

Pin	From	To	SIGNAL
1	MAIN	SMOTOR	SMTAP
2	MAIN	SMOTOR	SMTAN
3	MAIN	SMOTOR	SMTBP
4	MAIN	SMOTOR	SMTBN

**P/J 106 Wide Original Sensor (W2)**

Pin	From	To	SIGNAL
1	PSU	SENSOR	P+5VDC
2	SENSOR	MAIN	SNDB4H
3	PSU	SENSOR	LGND

**P/J 107 Document Sensor (W3)**

Pin	From	To	SIGNAL
1	PSU	SENSOR	P+5VDC
2	SENSOR	MAIN	SNDOCH
3	PSU	SENSOR	LGND

**P/J 109 Nudger Solenoid**

Pin	From	To	SIGNAL
1	PSU	SOLENOID	M+24VDC
2	MAIN	SOLENOID	ADFONL

**P/J 110 Scan Position Sensor (W4)**

Pin	From	To	SIGNAL
1	PSU	SENSOR	P+5VDC
2	SENSOR	MAIN	SNPOL
3	PSU	SENSOR	LGND

**P/J 111(A) A6 Control Panel**

Pin	From	To	SIGNAL
A1	MAIN	PANEL	PND7H
A2	MAIN	PANEL	PND5H
A3	MAIN	PANEL	PND3H
A4	MAIN	PANEL	PND1H
A5	MAIN	PANEL	PDBRDL
A6	MAIN	PANEL	PNA0H
A7	PSU	PANEL	LGND
A8	MAIN	PANEL	PC5L
A9	MAIN	PANEL	PNC254
A10	MAIN	PANEL	PNRRDL
A11	PSU	PANEL	P+5VDC
A12	PSU	PANEL	LGND

**P/J 111(B) A6 Control Panel**

Pin	From	To	SIGNAL
B1	MAIN	PANEL	PND6H
B2	MAIN	PANEL	PND4H
B3	MAIN	PANEL	PND2H
B4	MAIN	PANEL	PND0H
B5	MAIN	PANEL	PDBWRL
B6	MAIN	PANEL	PNA1H
B7	MAIN	PANEL	LCDENL
B8	MAIN	PANEL	PNWRL
B9	MAIN	PANEL	PNRSTL
B10	PANEL	MAIN	PINTL
B11	PSU	PANEL	P+5VDC
B12	PSU	PANEL	LGND

**P/J 112 Printer Interlock Switch**

Pin	From	To	SIGNAL
1	SENSOR	MAIN	SNPCOH
2	PSU	SENSOR	LGND

**P/J 113 Cutter Switch**

Pin	From	To	SIGNAL
1	SENSOR	MAIN	SNCUTH
2	PSU	SENSOR	LGND

**P/J 114 Printer Jam Sensor (W6)**

Pin	From	To	SIGNAL
1	PSU	SENSOR	P+5VDC
2	SENSOR	MAIN	SNPJMHL
3	PSU	SENSOR	LGND

**P/J 115 Printer Motor**

Pin	From	To	SIGNAL
1	MAIN	PMOTOR	PMTAP
2	MAIN	PMOTOR	PMTAN
3	MAIN	PMOTOR	PMTBP
4	MAIN	PMOTOR	PMTBN

**P/J 116 Low Paper Sensor (W7)**

Pin	From	To	SIGNAL
1	PSU	SENSOR	LGND
2	PSU	SENSOR	PHPAP
3	PSU	SENSOR	LGND
4	SENSOR	MAIN	SNPAPL

**P/J 117 Wide Paper Sensor (W8)**

Pin	From	To	SIGNAL
1	PSU	SENSOR	LGND
2	PSU	SENSOR	PHB4P
3	PSU	SENSOR	LGND
4	SENSOR	MAIN	SNPB4L

**P/J 118 Cutter Solenoid**

Pin	From	To	SIGNAL
1	PSU	SOLENOID	M+24VDC
2	MAIN	SOLENOID	CUTONL

**P/J 119 Fan**

Pin	From	To	SIGNAL
1	PSU	FAN	M+24VDC
2	PSU	FAN	HGND

**P/J 120 Thermal Head (W9)**

Pin	From	To	SIGNAL
1	PSU	TH	M+24VDC
2	PSU	TH	M+24VDC
3	PSU	TH	M+24VDC
4	PSU	TH	M+24VDC
5	PSU	TH	M+24VDC
6	PSU	TH	HGND
7	PSU	TH	HGND
8	PSU	TH	HGND
9	PSU	TH	HGND
10	PSU	TH	HGND
11	PSU	TH	LGND
12	PSU	TH	M+5VDC

**P/J 121 Thermal Head (W10)**

Pin	From	To	SIGNAL
1	TH	MAIN	THSEL
2	TH	MAIN	THSNH
3	TH	MAIN	THB4L
4	MAIN	TH	THST4L
5	MAIN	TH	THST3L
6	MAIN	TH	THST2L
7	MAIN	TH	THST1L
8	MAIN	TH	THCLKP
9	PSU	TH	LGND
10	MAIN	TH	THLATL
11	MAIN	TH	THDTBH
12	MAIN	TH	THRSTL
13	TH	MAIN	RCON0S
14	TH	MAIN	RCON1S
15	TH	MAIN	RCON2S

# P/J 123 Video Assembly

Pin	From	To	SIGNAL
1	MAIN	VP	VDTH5H
2	MAIN	VP	VDTH4H
3	MAIN	VP	VDTH3H
4	MAIN	VP	VDTH2H
5	MAIN	VP	VDTH1H
6	MAIN	VP	VDTH0H
7	MAIN	VP	SCMD3H
8	MAIN	VP	SCMD2H
9	MAIN	VP	SCMD1H
10	MAIN	VP	SCMD0H
11	MAIN	VP	VDMD1H
12	MAIN	VP	VDMD0H
13	MAIN	VP	VDMD2H
14	MAIN	VP	SDCONL
15	VP	MAIN	SMTRQL
16	VP	MAIN	SC5MSL
17	MAIN	VP	SHDWRL
18	MAIN	VP	DAKWRL
19	VP	MAIN	SCDENL
20	MAIN	VP	SCDRQL
21	VP	MAIN	SCDTBL
22	VP	MAIN	CLK664
23	PSU	VP	M+5VDC
24	PSU	VP	LGND
25	PSU	VP	M+5VDC
26	PSU	VP	LGND
27	PSU	VP	M-12VDC
28	MAIN	VP	LEDONL
29	PSU	VP	M+12VDC
30	PSU	VP	LGND
31	PSU	VP	M+15VDC
32	PSU	VP	LGND
33	PSU	VP	M+15VDC
34	PSU	VP	LGND

# P/J 124 (A) Power Supply

Pin	From	To	SIGNAL
1A	PSU	CNC	AGND
2A	PSU	CNC	AGND
3A	PSU	CNC	M+12VDC
4A	PSU	CNC	M-12VDC
5A	PSU	CNC	LGND
6A	PSU	CNC	LGND
7A	PSU	CNC	P+5VDC
8A	MAIN	PSU	M24ONL
9A	PSU	CNC	LGND
10A	PSU	CNC	LGND
11A	PSU	CNC	M+5VDC
12A	PSU	CNC	M+5VDC
13A	PSU	CNC	LGND
14A	PSU	CNC	M+15VDC
15A	PSU	CNC	M+24VDC
16A	PSU	CNC	M+24VDC
17A	PSU	CNC	M+24VDC
18A	PSU	CNC	M+24VDC
19A	PSU	CNC	HGND
20A	PSU	CNC	HGND
21A	PSU	CNC	HGND
22A	PSU	CNC	HGND

# P/J 124 (B) Power Supply

Pin	From	To	SIGNAL
1B	PSU	CNC	AGND
2B	PSU	CNC	AGND
3B	PSU	CNC	M+12VDC
4B	PSU	CNC	M-12VDC
5B	PSU	CNC	LGND
6B	PSU	CNC	P+5VDC
7B	PSU	CNC	P+5VDC
8B	MAIN	PSU	MPWONL
9B	PSU	CNC	LGND
10B	PSU	CNC	LGND
11B	PSU	CNC	M+5VDC
12B	PSU	CNC	M+5VDC
13B	PSU	CNC	LGND
14B	PSU	CNC	M+15VDC
15B	PSU	CNC	M+24VD
16B	PSU	CNC	M+24VD
17B	PSU	CNC	M+24VD
18B	PSU	CNC	M+24VD
19B	PSU	CNC	HGND
20B	PSU	CNC	HGND
21B	PSU	CNC	HGND
22B	PSU	CNC	HGND

**P/J 201 Video Assembly**

Pin	From	To	SIGNAL
1	VP	CNC	LGND
2	VP	CNC	M+15V
3	VP	CNC	LGND
4	VP	CNC	M+15V
5	VP	CNC	LGND
6	VP	CNC	M+12V
7	VP	CNC	LEDONL
8	VP	CNC	M-12V
9	VP	CNC	LGND
10	VP	CNC	M+5V
11	VP	CNC	LGND
12	VP	CNC	M+5V
13	VP	CNC	CLK664
14	VP	CNC	SCDTBL
15	VP	CNC	SCDRQL
16	VP	CNC	SCDENL
17	VP	CNC	DAKWRL
18	VP	CNC	SHDWRL
19	VP	CNC	SC5MSL
20	VP	CNC	SMTRQL
21	VP	CNC	SDCONL
22	VP	CNC	VDMD2H
23	VP	CNC	VDMD0H
24	VP	CNC	VDMD1H
25	VP	CNC	SCMD0H
26	VP	CNC	SCMD1H
27	VP	CNC	SCMD2H
28	VP	CNC	SCMD3H
29	VP	CNC	VDTH0H
30	VP	CNC	VDTH1H
31	VP	CNC	VDTH2H
32	VP	CNC	VDTH3H
33	VP	CNC	VDTH4H
34	VP	CNC	VDTH5H

**P/J 202 A-Si Sensor**

Pin	From	To	SIGNAL
1	A-Si SENSOR	VP	VCC
2	A-Si SENSOR	VP	TOUT
3	A-Si SENSOR	VP	DOUT
4	A-Si SENSOR	VP	VEE
5	A-Si SENSOR	VP	GND
6	A-Si SENSOR	VP	VR
7	A-Si SENSOR	VP	ENA
8	A-Si SENSOR	VP	CK
9	A-Si SENSOR	VP	CL
10	A-Si SENSOR	VP	DIN

**P/J 204 A-Si Sensor**

Pin	From	To	SIGNAL
1	VP	LED	LED
2	VP	LED	GND

## 8. Store and Forward Option

Store and Forward Option [8-1](#)

## Introduction

The Store and Forward Option provides the capability to scan a document into memory and transmit the information to one or more facsimile terminals. The following capabilities are in addition to the basic features of the terminal:

- Sequential Store and Forward.
- Sequential poll.
- Sequential group two-way (send/poll).
- Additional Dynamic Random memory (D-Ram, 5 M byte).
- Job reserve report.

The Terminal has the ability to scan, compress and store documents in Super Fine, Fine or Standard resolution and in Modified Modified Read format.

The following operator input options are available with Store and Forward:

From the control panel:

Original                      Light/Normal/Dark/Halftone  
Comm. Mode                      Auto/Error correct  
Resolution                      Standard/Fine/Superfine  
Confirm  
Job Reserve

Selected from Menu 1 and 3:

Page count  
4800BPS  
Secure Send  
Relay send  
Delayed start

Long original is not available in Store and forward.

### Memory:

The minimum storage capacity provided is shown in Table 1.

**Table 1**

Error Correct Mode	Modified Modified Read	
	Resolution Selected	Memory Capacity
Error Correct Mode	Super Fine Fine Standard	18 Pages 28 Pages 34 Pages

A display message is displayed indicating the cumulative percent of memory used and the number of pages stored. The following is an example of the display message:

STORING PAGE TO MEMORY, PLEASE WAIT  
MEMORY: EMPTY[ >>>>>]FULL

Each indicating arrow, in the example above, represents 10 percent memory used. In the example above five bolded arrows indicates 50 60 percent of memory is used. Should memory overflow occur, scanning and the ADF will stop. You can send the partial batch or cancel the job.

### Reduction:

Reduction can not be performed prior to storing a document. Transmit reduction occurs automatically when the receive terminal indicates A4 letter recording paper capability. The Table 2 indicates the transmit reduction capability:

**Table 2**

Scan length of stored data	Paper size of receiver	
	A4	B4
A4 size	A4 (100%)	A4 (100%)
B4 size	A4 (81.3%)	B4 (100%-G3) A4(81.3%-G2)

## Repair Analysis Procedure

Repair Analysis Procedures are incorporated into the primary manual.

## Parts List

Parts list is incorporated into the primary manual.

## Installation

1. Install A8 Store and Forward PWB.
  - a. Remove power cord.
  - b. Remove right hand cover.
  - c. Align A8 P6 to A2 J6 connector and push to secure.
2. Secure A8 to terminal.
  - a. Secure rear of A8 to Power supply.
  - b. Secure front of A8 to RH frame.
3. Apply 7017SF Control Panel label.